FA NUMBER: 15140160
SITE ID: 2874
SITE NAME: RASIKA

616 E STREET NW
WASHINGTON, DC 20004

DCRA

SITE INFORMATION

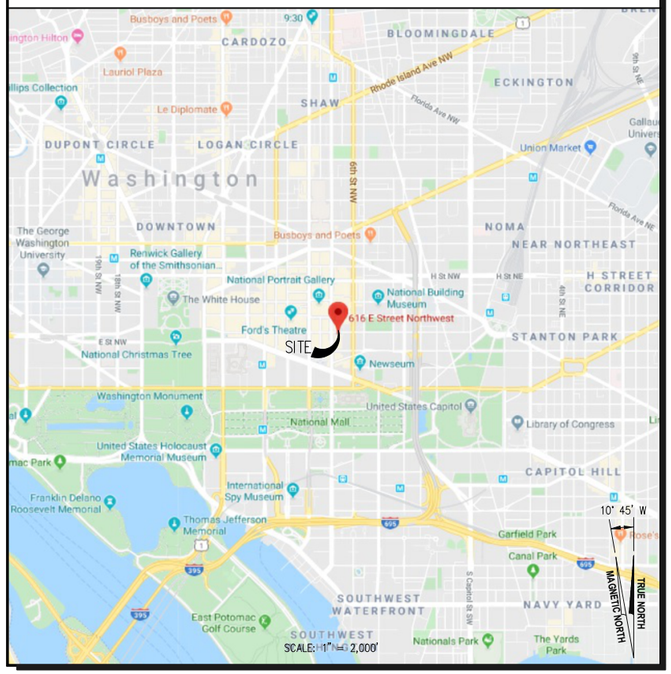
SCOPE OF WORK:

1. INSTALL AT&T EQUIPMENT CABINETS ON NEW EQUIPMENT SUPPORT PLATFORM ON LOW PENTHOUSE ROOF.
2. INSTALL (6) PROPOSED AND (6) FUTURE AT&T ANTENNAS AND ASSOCIATED RRH'S ON (2) NEW SCREENED ANTENNA SUPPORT PLATFORMS ON PENTHOUSE ROOF.
3. PROVIDE TELCO & POWER SERVICE TO AT&T EQUIPMENT FROM DEMARCATION POINTS IN THE BUILDING.
4. INSTALL EMERGENCY GENERATOR RECEPTACLE AT GRADE LEVEL.

FA#:	15140160
SITE ID:	2874
JURISDICTION:	DISTRICT OF COLUMBIA
ZONING:	DOWNTOWN ZONE (D-6-R)
TAX ACCOUNT NUMBER:	0457 0042
LOT/BOOK/PAGE:	0042/194/197
PARCEL AREA:	± 75,813 SF
PARCEL OWNER:	PQ CONTROLLING ENTITY, INC.
STRUCTURE TYPE:	ROOFTOP
GROUND ELEVATION:	±41.3' (AMSL)
LATITUDE:	N 38° 53' 44.186" (NAD83)
LONGITUDE:	W -77° 01' 15.931" (NAD83)

NOTE TO GENERAL CONTRACTOR
NO WORK IS TO BE PERFORMED ON THIS SITE WITHOUT REVIEW OF THE APPROVED STRUCTURAL ANALYSIS. IF ANY DISCREPANCIES ARE FOUND THE GENERAL CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING. AT NO TIME WILL ANY ADDITIONAL ANTENNAS BE INSTALLED WITHOUT WRITTEN CONSENT FROM TOWER ENGINEER.

VICINITY MAP



SHEET INDEX

811 Know what's below. Call before you dig.

SEAL:

DISTRICT OF COLUMBIA CAMILLE F. SHABSHAB 10657 REGISTERED PROFESSIONAL ENGINEER

I AM RESPONSIBLE FOR DETERMINING THAT THE ENGINEERING DESIGNS INCLUDED IN THIS APPLICATION ARE IN COMPLIANCE WITH ALL RELEVANT LAWS AND REGULATIONS OF THE DISTRICT OF COLUMBIA. I HAVE PERSONALLY PREPARED, OR DIRECTLY SUPERVISED THE PREPARATION OF, THE ENGINEERING DESIGNS INCLUDED IN THIS APPLICATION

entrex communication services, inc.
6600 Rockledge Drive, Suite 550
Bethesda, MD 20817
PHONE: (202) 408-0960
FAX: (202) 408-0961

at&t
7150 STANDARD DRIVE
HANOVER, MD 21076

smartlink
1362 MELLON RD, STE 140
HANOVER, MD 21076
PHONE: (410) 582-8043
FAX: (410) 221-2962

PROJECT NO:	1152.400
DESIGNER:	TMF
ENGINEER:	C.S.

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34"
0 1/2 1
GRAPHIC SCALE IN INCHES

FA NUMBER: 15140160
SITE ID: 2874
RASIKA
616 E STREET NW
WASHINGTON, D.C. 20004

PROJECT TEAM

APPLICANT: AT&T MOBILITY
7150 STANDARD DRIVE
HANOVER, MD 21076

ARCHITECT/ENGINEER: ENTREX COMMUNICATION SERVICES, INC.
6600 ROCKLEDGE DRIVE, SUITE 550
BETHESDA, MD 20817
CAMILLE SHABSHAB (202) 408-0960

PROJECT MANAGEMENT: SMARTLINK LLC
1362 MELLON RD, SUITE 140
HANOVER, MD 21076
PHONE: (410) 582-8043

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2017 DISTRICT OF COLUMBIA CONSTRUCTION CODE
- 2015 INTERNATIONAL BUILDING CODE
- 2017 DCMR 12C, DC ELECTRICAL CODE
- 2014 NATIONAL ELECTRICAL CODE
- 2017 DCMR 12H, DC FIRE CODE
- 2015 INTERNATIONAL FIRE CODE
- 2017 DCMR 12J, DC EXISTING BUILDING CODE
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSI/TIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311

APPROVAL BLOCK

		APPROVED	APPROVED AS NOTED	REVISE & RESUBMIT
OWNER REPRESENTATIVE	DATE	☐	☐	☐
SITE AQUISITION	DATE	☐	☐	☐
CONSTRUCTION MANAGER	DATE	☐	☐	☐
ZONING	DATE	☐	☐	☐
RF ENGINEER	DATE	☐	☐	☐

SUBMITTALS

DATE	DESCRIPTION	REVISION
04-22-2020	ADDITIONAL REDLINES	1
11-09-2020	REVISE POWER SOURCE	2
11-11-2020	COMMENTS	3
04-19-2021	EXPAND ANTENNA EMCLOSURE / ANTENNA CLEARANCES	4
08-23-2021	ADD ANTENNA ENCLOSURE STAIRS & UPDATE DC9'S	5

TITLE:

TITLE SHEET

Board of Zoning Adjustment
District of Columbia
CASE NO.20690
EXHIBIT NO.4

SHEET NUMBER: T-1

STRUCUTRAL NOTES

1. THE STRUCTURAL STEEL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ANCHOR BOLT LOCATIONS, ELEVATIONS OF TOP OF CONCRETE AND BEARING PLATES, ALIGNMENT ETC. PRIOR OF STEEL ERECTION.

2. THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS SHALL GOVERN:
   A. AISC– "ALLOWABLE STRESS DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
   B. AISC– "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
   C. AWS– "D1.1 STRUCTURAL WELDING CODE–STEEL".

3. MATERIAL, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS

STRUCTURAL WIDE FLANGE & M SHAPES	A992 OR A572, FY = 50KSI
OTHER STRUCTURAL SHAPES AND PLATES	A36, F = 36KSI
STRUCTURAL TUBING	A500, GRADE B, FY = 46KSI
HIGH STRENGTH BOLTS	A325
THREADED RODS	A354, GRANDE BC
ANCHOR BOLTS	A325 OR A354 BC
PIPE (HANDRAIL)	SCH 40 PIPE

4. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 USING E70XX ELECTRODES. UNLESS OTHERWISE NOTED PROVIDE CONTINUOUS MINIMUM SIZED FILLET WELDS PER AISC REQUIREMENTS.

5. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IN NOT PERMITTED. ALL HOLES IN BEARING PLATES SHALL BE DRILLED.

6. ALL STEEL TO BE HOT–DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123.

7. EPOXY ANCHORS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

8. ALL BOLTS SHALL BE TIGHTENED USING TURN–OF–THE–NUT METHOD PER AISC SPECIFICATIONS USING STANDARD HOLES.

9. THE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.

10. THE GENERAL CONTRACTOR AND HIS SUB CONSULTANTS SHALL BE RESPONSIBLE FOR OBTAINING ALL BUILDING AND OR TRADE PERMITS AND INSPECTIONS THAT MAY BE REQUIRED FOR THE WORK.

11. STRUCTURAL THREADED FASTENERS FOR STEEL ANTENNA MOUNTING ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. STRUCTURAL FASTENERS SHALL BE 5/8" DIAMETER BEARING TYPE CONNECTIONS WITH THE THREADS EXCLUDED FROM THE SHEAR PLANE FOR ANGLES. STRUCTURAL FASTENERS SHALL BE 3/4" DIAMETER BEARING TYPE CONNECTIONS WITH THE THREADS EXCLUDED FROM THE SHEAR PLANE FOR ALL OTHER STRUCTURAL SHAPES. ALL EXPOSED STRUCTURAL FASTENERS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED UNLESS OTHERWISE NOTED.

12. EXPANSION ANCHORS INSTALLED IN CONCRETE SHALL BE HILTI STAINLESS STEEL ANCHORS AS SPECIFIED ON THE PLANS. THE EXPANSIONS ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS.

13. NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL SHALL VERIFY NORTH AND INFORM ARCHITECT/ENGINEER OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.

14. ROOF PROTECTION PADS UNDER THE CABLE BRIDGE SLEEPERS AND ROOF PAVERS SHALL BE 0.30" THICK RUBBER FIRESTONE PROTECTION PADS. THE ROOF PROTECTION PADS SHALL EXTEND A MINIMUM OF 2" BEYOND THE PERIMETER OF THE OF THE SLEEPERS. PROVIDE A 28 LB FELT SEPARATOR SHEET 2" LARGER THAN THE ROOF PROTECTION PAD DIRECTLY ON THE ROOF. REMOVE ALL LOOSE STONES PRIOR TO PLACING THE SEPARATOR SHEET. ROOF PROTECTION PADS SHALL NOT BE PLACED WITH IN 6" OF AN ADJACENT PAD OR OTHER ROOF OBSTRUCTION TO FACILITATE DRAINAGE.

15. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE BUILDING OWNER'S ROOF CONTRACTOR WHO WILL COMPLETE ALL WORK ASSOCIATED WITH THE ROOF. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE BUILDING OWNER'S ROOF CONTRACTOR BEFORE INSTALLATION OF ANY ROOF MOUNTED EQUIPMENT.

16. ALL CAST IN PLACE CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318 AND ACI 301, AND SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 psi (U.O.N). CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL, UNLESS OTHERWISE NOTED. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.

17. CONCRETE SHALL BE 4 TO 6% AIR ENTRAINED.

18. ALL REINFORCING STEEL SHALL CONFORM TO ASTM 615 GRADE 60. DEFORMED BILLET STEEL BARS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

19. FENCED AREA SHALL BE CLEARED AND GRUBBED. REMOVE UNSUITABLE LOOSE OR SOFT SOIL, ORGANIC MATERIAL OR RUBBLE, TO FIRM SUBGRADE. FILL UNDER CUT AND COMPACT UP TO 6" BELOW FINISH GRADE. PLACE A MIRAFI 500X SOIL STABILIZATION FABRIC ON SUBGRADE. FILL WITH 6" OF AASHTO 57 STONE TO FINISH GRADE.

20. WHERE FILL IS REQUIRED, FILL IN LAYERS WHICH DO NOT EXCEED 8" BEFORE COMPACTION. SPREAD LAYER UNIFORMLY AND EVENLY. BLADE MIX EACH LAYER TO ENSURE MATERIAL UNIFORMITY. FILL MATERIAL SHALL NOT CONTAIN MATERIAL MORE THAN 3" IN DIAMETER. COMPACT EACH LAYER NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 MODIFIED PROCTOR TEST OR (ASTM D698 STANDARD PROCTOR TEST). USE FILL MATERIAL WITH MOISTURE CONTENT AS REQUIRED TO ATTAIN THE SPECIFIED DEGREE OF COMPACTION. COMPACT USING MULTIPLE WHEEL PNEUMATIC TIRE ROLLED, VIBRATORY ROLLER, OR SHEEPS FOOT ROLLERS.

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.

3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.

5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

7. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.

8. TRANSMITTER EQUIPMENT AND ANTENNAS ARE DESIGNED TO MEET ANSI/EIA/TIA 222–G REQUIREMENTS.

9. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.

10. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.

11. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.

12. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.

13. PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.

14. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.

15. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.

16. NO SIGNIFICANT NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY.

17. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).

18. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.

19. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER UNLESS OTHERWISE NOTED IN THIS DRAWING SET.

20. ALL ANTENNA SCREENING SHALL BE FINISHED OR PAINTED TO MATCH THE STRUCTURE AS DIRECTED BY THE FACILITIES MANAGEMENT DIVISION.

GROUNDING NOTES

1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.

2. ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.

3. ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.

4. GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTES OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACE, SPRAY CADWELD WITH GALVANIZING PAINT.

5. GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.

6. GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.

7. ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.

8. INSTALL 2 AWG GREEN–INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND 2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.

9. REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTION TO GROUND BARS SHALL BE MADE WITH TWO–HOLE LUGS.

10. THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCRUING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"x8'–0" COPPER CLAD STEEL INTERCONNECTED WITH 2 BARE TINNED COPPER WIRE BURIED 30" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART TO ACHIEVE CONE OF PROTECTION.

11. IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45'.

12. EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A–AT.

13. CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE AT&T CONSTRUCTION MANAGER.

14. GROUND RING & CONNECTIONS TO IT SHALL BE 2 AWG SOLID BARE TINNED COPPER WIRE. EQUIPMENT GROUND CONNECTIONS TO MGB SHALL BE 2 AWG STRANDED TO WIRE.

15. PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR–SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR–SHIELD OR EQUAL.

16. ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A AT&T REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.

17. WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.

18. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTIONS, APPLY APPROPRIATE ANTI–OXIDIZATION PAINT.

19. WHERE METALLIC ENCLOSURES AND OBJECTS ARE LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST.

20. TOWER BASE GROUND BAR REQUIRES (2) SOLID LEADS EXOTHERMICALLY WELDED TO THE GROUND BAR.

21. OUTDOOR SITES: MAIN GROUND BAR REQUIRES (2) SOLID LEADS EXOTHERMICALLY WELDED TO IT AND TO THE GROUND RING.

22. INDOOR/ROOFTOP SITES: MAIN GROUND BAR SHALL BE BONDED TO BUILDING PRINCIPAL GROUND AS SHOWN ON PLAN.

23. ALL SOLID LEADS TERMINATED TO GROUND BARS SHALL BE PROTECTED WITH CARFLEX.

24. ALL SOLID GROUND LEADS NOT BEING USED SHALL BE COILED (PIGTAILS) FOR FUTURE USE AS NEEDED.

25. DO NOT ROUTE GROUNDING CONDUCTORS THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR. CLIPS AND FASTENERS USED TO SECURE ANY GROUND WIRE SHALL BE NON–METALLIC TO PREVENT "CHOKE EFFECT."

ELECTRICAL ABBREVIATIONS

A	AMPERE	MCB	MAIN CIRCUIT BREAKER
AIC	ASYMMETRICAL INTERRUPT CURRENT	MLO	MAIN LUGS ONLY
AWG	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE
C	CONDUIT	NTS	NOT TO SCALE
CSC	CELL SITE CABINET	NFSS	NON–FUSIBLE SAFETY SWITCH
FSS	FUSIBLE SAFETY SWITCH	PVC	POLYVINYL CHLORIDE
GFI	GROUND FAULT INTERRUPTING	P	POLE
G	GROUND	ø	PHASE
kVA	KILOVOLT–AMPERE	RMC	RIGID METAL CONDUIT
KW	KILOWATT	V	VOLT
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT	W	WIRE
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT		

ELECTRICAL NOTES

1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.

2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.

3. VERIFY HEIGHT WITH PROJECT MANAGER PRIOR TO INSTALLATION.

4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.

5. CONTRACTOR SHALL COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONALLY CIRCUMSTANCES SURROUNDING THE PROJECT.

6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.

7. ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND IN PERCENT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.

8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.

9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.

10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE–STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE–RATED ASSEMBLIES. WATER–TIGHT USING SILICONE SEALANT.

11. LOCATE ALL PENETRATIONS SUCH THAT ALL REINFORCEMENT CONTAINED WITHIN THE EXISTING BUILDING CONSTRUCTION REMAINS INTACT AND UNDISTURBED. SUBMIT LOCATING METHOD TO PROJECT MANAGER FOR APPROVAL PRIOR TO EXECUTION.

12. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.

13. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE 12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110–14(C).

14. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.

15. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.

16. CONDUIT: ALL ABOVE GRADE CONDUITS SHALL BE RIGID & LFMC TO 6' AS STATED BELOW

   A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.

   B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.

   C. LIQUID–TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL–SIZE GROUND CONDUCTOR.

   D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.

   E. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV–RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.

   F. THE TOTAL RADII OF BENDS IN A CONDUIT SHALL NOT EXCEED 360'.

17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PHENOLIC PLASTIC NAMEPLATES. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.

18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO AT&T PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE AT&T PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.

19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.

20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.

21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS AND CIRCUITS NOT SCHEDULED FOR REMOVAL.

22. RED LINED AS–BUILT PLANS SHALL BE PROVIDED TO THE AT&T CONSTRUCTION MANAGER.

DCRA

SEAL:

DISTRICT OF COLUMBIA
CAMILLE F. SHARMA
10657
REGISTERED
PROFESSIONAL ENGINEER

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entrex
communication services, inc.
6600 Rockledge Drive, Suite 550
Bethesda, MD 20817
PHONE: (202) 408-0960
FAX: (202) 408-0961

at&t
7150 STANDARD DRIVE
HANOVER, MD 21076

smartlink
1362 MELLON RD, STE 140
HANOVER, MD 21076
PHONE: (410) 582-8043
FAX: (410) 221-2962

PROJECT NO:	1152.400
DESIGNER:	TMF
ENGINEER:	C.S.

THESE DRAWINGS ARE FORMATTED TO BE FULL–SIZE AT 22"X34"

0 1/2 1

GRAPHIC SCALE IN INCHES

FA NUMBER: 15140160
SITE ID: 2874
RASIKA
616 E STREET NW
WASHINGTON, D.C. 20004

SUBMITTALS

DATE	DESCRIPTION	REVISION
04–22–2020	ADDITIONAL REDLINES	1
11–09–2020	REVISE POWER SOURCE	2
11–11–2020	COMMENTS	3
04–19–2021	EXPAND ANTENNA EMCLOSURE / ANTENNA CLEARANCES	4
08–23–2021	ADD ANTENNA ENCLOSURE STAIRS & UPDATE DC9'S	5

TITLE:

GENERAL NOTES

SHEET NUMBER:

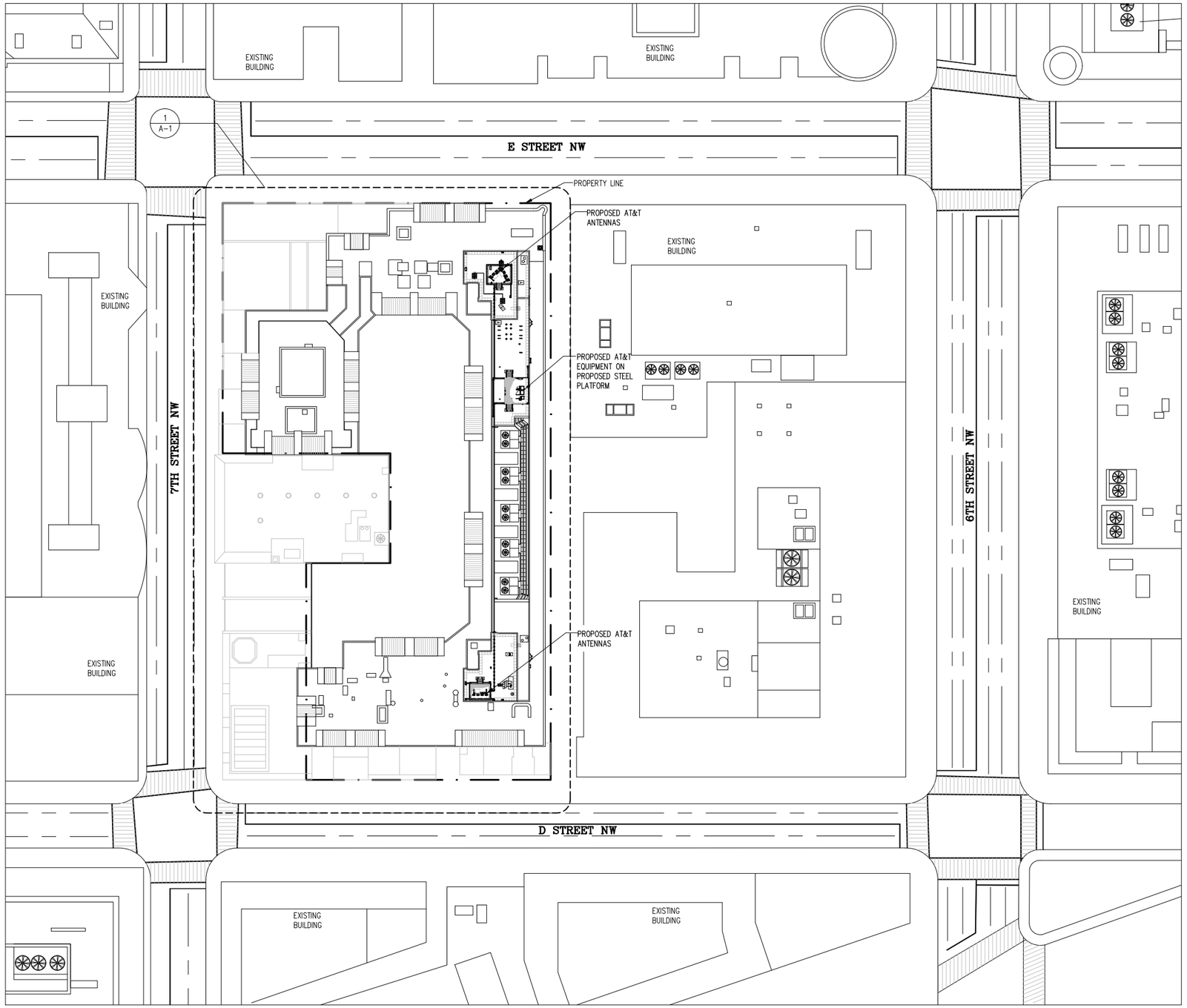
N-1

SITE PLAN NOTES

1.) SITE NAME: RASIKA
2.) OWNER: PQ CONTROLLING ENTITY, INC.

MAILING ADDRESS: 616 E STREET NW
WASHINGTON, DC 20004

COUNTY: DISTRICT OF COLUMBIA
SSL: 0457 0042
LAND USE: COMMERCIAL OFFICE – LARGE (052)
ZONING: DOWNTOWN ZONE (D-6-R)



SITE PLAN
SCALE: 1" = 40'-0"

1
C-1

TRUE NORTH

DCRA

SEAL:

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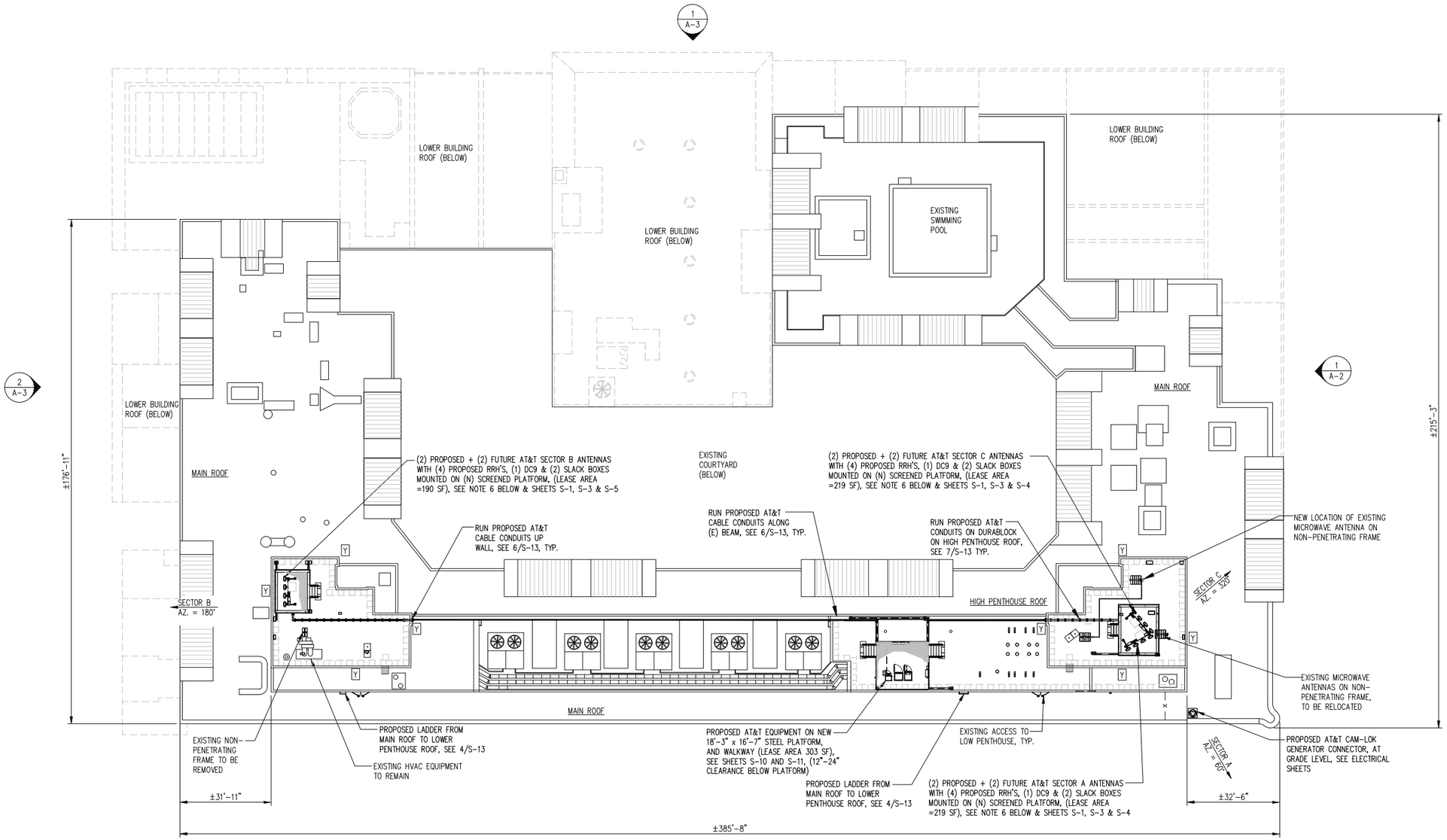
TITLE:

SITE PLAN

SHEET NUMBER:

C-1



ROOF AND EQUIPMENT LAYOUT PLAN

SCALE: 1" = 20'-0"

1 A-1 — TRUE NORTH

RF LEGEND	
- - - -	= RF BARRIER CHAIN
B	= BLUE RF NOTICE 2 SIGN
Y	= YELLOW RF CAUTION 2 SIGN

NOTE:
RF SIGNS ARE NOT REQUIRED PER THE SITESAFE SITE COMPLIANCE REPORT DATED 01/15/2020.

NOTES:

1. ROOF CONSTRUCTION: BALLASTED ROOFING MEMBRANE ON CONCRETE SLAB, BEAMS AND COLUMNS
2. ELEVATIONS ARE IN REFERENCE TO THE ENTRANCE LEVEL WHICH IS TAKEN AS REFERENCE ELEV. 0.0'
3. SEE SHEETS E-1 THRU E-3 FOR UTILITY AND GROUNDING DETAILS
4. SEE NOTES ON SHEET N-1 FOR INFO NOT NOTED.
5. VERIFY EXISTING COLUMN LOCATIONS PRIOR TO FABRICATING STEEL FRAME.
6. PROPOSED SCREENED PLATFORM TO MATCH EXISTING BUILDING FACADE IN COLOR AND TEXTURE.
7. TOTAL PROPOSED AT&T LEASE AREA = 712 SF.

DCRA

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PROJECT NO: 1152.400
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ENGINEER: C.S.
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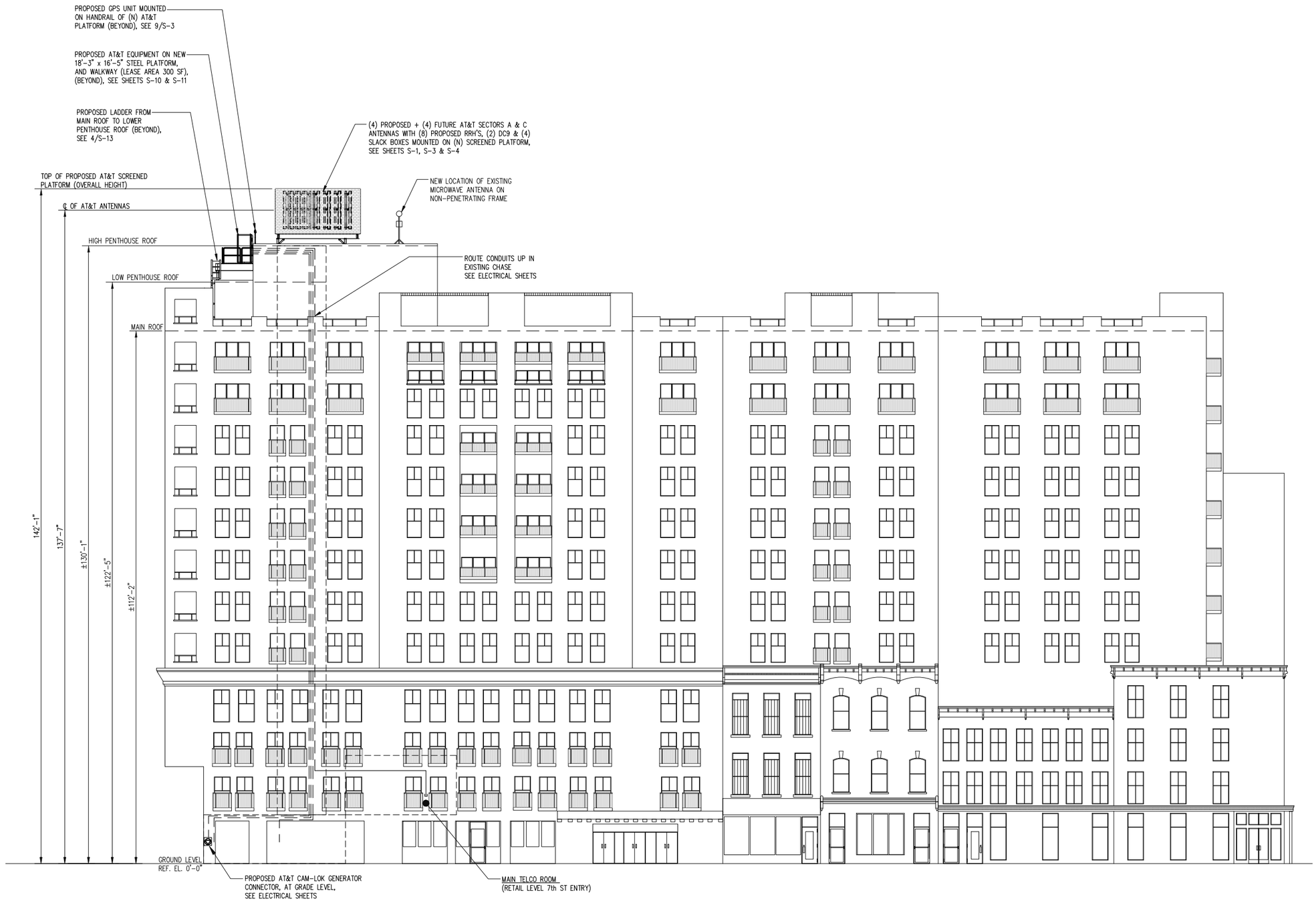
TITLE:

ROOF AND EQUIPMENT LOCATION PLAN

SHEET NUMBER:

A-1



NOTE:

1. PROPOSED SCREENED PLATFORM TO MATCH EXISTING BUILIND FACADE IN COLOR AND TEXTURE.

NORTH BUILDING ELEVATION

SCALE: 3/32"=1'-0"

1 / A-2

DCRA

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ENGINEER:	C.S.

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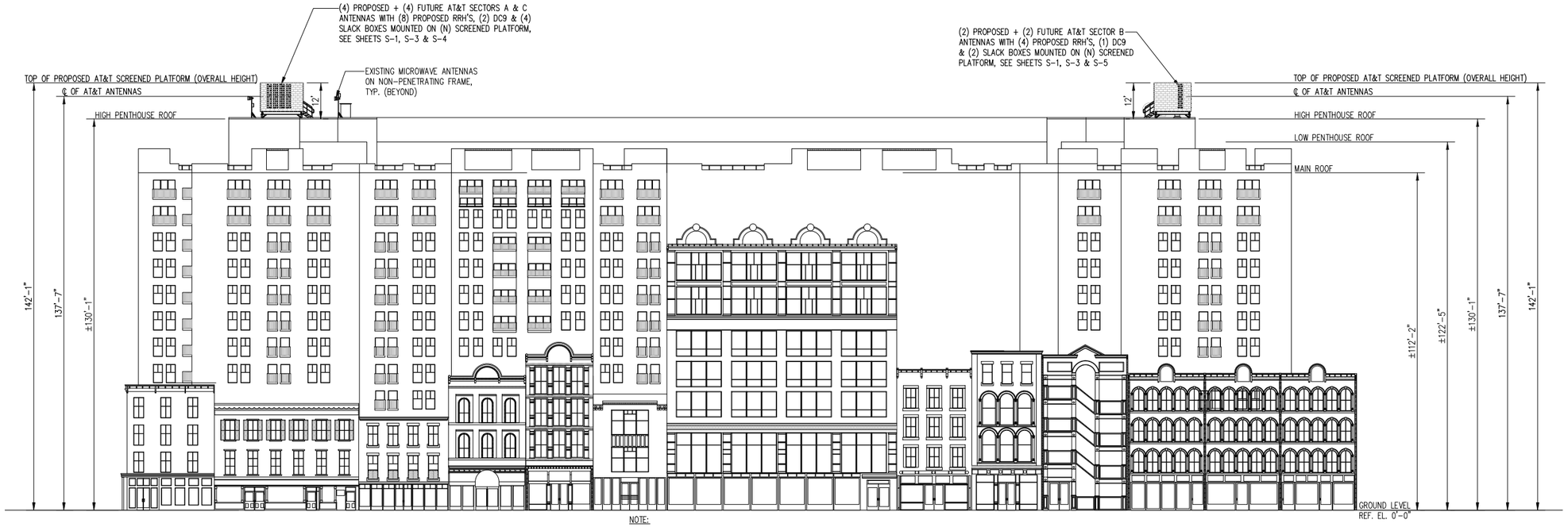
TITLE:

NORTH BUILDING ELEVATION

SHEET NUMBER:

A-2



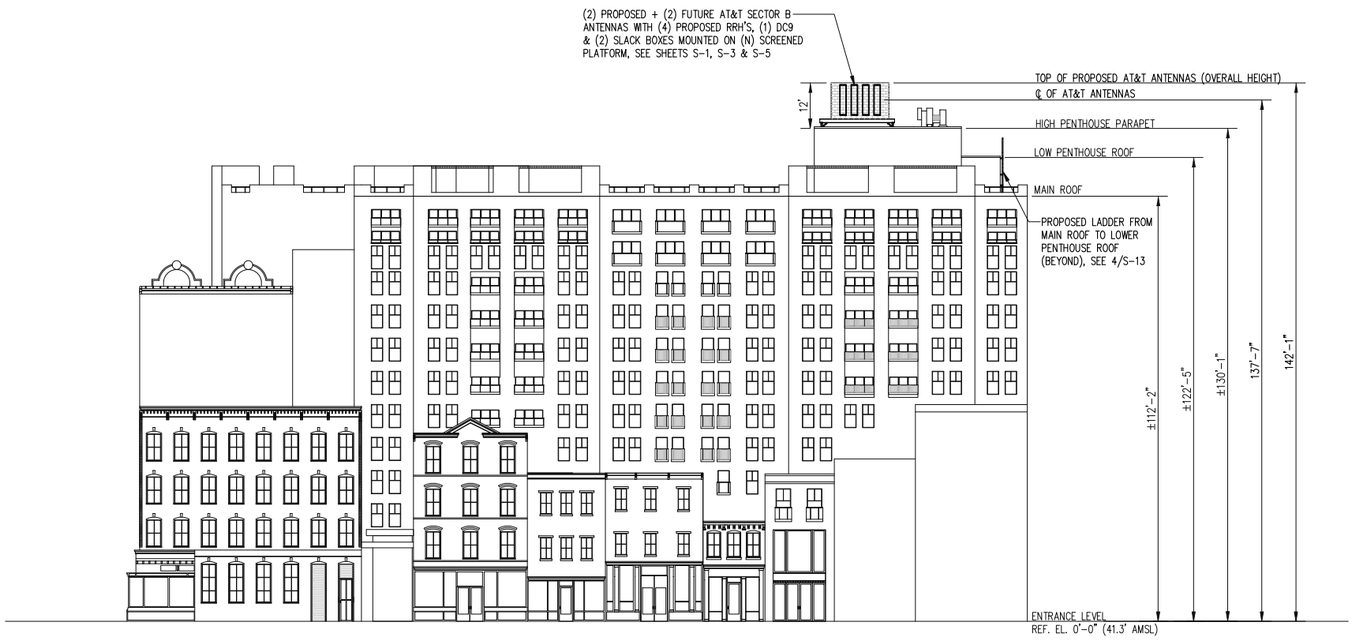
NOTE:

1. PROPOSED SCREENED PLATFORM TO MATCH EXISTING BUILIND FACADE IN COLOR AND TEXTURE.

WEST BUILDING ELEVATION

SCALE: 1"=20'-0"

1 / A-3



SOUTH BUILDING ELEVATION

SCALE: 1"=20'-0"

2 / A-3

DCRA

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TITLE:

WEST & SOUTH BUILDING ELEVATIONS

SHEET NUMBER:

A-3

CABLE SCHEDULE AND RF SYSTEM DESIGN PLAN

SECTOR	ANTENNA POSITION	ANTENNA STATUS	TECHNOLOGY/ FREQUENCY	MAKE	MODEL	RAD CTR. FT. AGL	AZIMUTH	ELECTRICAL DOWNTILT	MECHANICAL DOWNTILT	RRH/TMA QUANTITY AND MODEL	TRANSMISSION CABLE				
											CABLE LENGTH	JUMPER LENGTH	STATUS	QUANTITY	TYPE
1	#1	FUTURE		FUTURE	FUTURE										
	#2	NEW	LTE 700	COMMSCOPE	NNHH-65C-R4	137'-7"	60°	4°	0°	(1) NOKIA B14/12/29 TRIBAND RRH AHLBBA	±160'	±35'	NEW	6	FIBER
			LTE 700					4°							
			LTE 700					4°							
			LTE 1900					2°		(1)AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB					
			LTE AWS					2°							
			LTE AWS					2°							
	#3	FUTURE		FUTURE	FUTURE										
	#4	NEW	5G 850	COMMSCOPE	NNHH-65C-R4	137'-7"	60°	4°	0°	(1)AIRSCALE RRH 4T4R B5 160W AHCA	±160'	±35'	NEW	2	FIBER
			LTE WCS					2°		(1)AIRSCALE RRH 4T4R B30 100W AHNA					
2	#5	FUTURE		FUTURE	FUTURE										
	#6	NEW	LTE 700	COMMSCOPE	NNHH-65C-R4	137'-7"	180°	4°	0°	(1) NOKIA B14/12/29 TRIBAND RRH AHLBBA	±160'	±10'	NEW	6	FIBER
			LTE 700					4°							
			LTE 700					4°							
			LTE 1900					2°		(1)AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB					
			LTE AWS					2°							
			LTE AWS					2°							
	#7	FUTURE		FUTURE	FUTURE										
	#8	NEW	5G 850	COMMSCOPE	NNHH-65C-R4	137'-7"	180°	4°	0°	(1)AIRSCALE RRH 4T4R B5 160W AHCA	±160'	±10'	NEW	2	FIBER
			LTE WCS					2°		(1)AIRSCALE RRH 4T4R B30 100W AHNA					
3	#9	FUTURE		FUTURE	FUTURE										
	#10	NEW	LTE 700	COMMSCOPE	NNHH-65C-R4	137'-7"	320°	4°	0°	(1) NOKIA B14/12/29 TRIBAND RRH AHLBBA	±285'	±35'	NEW	6	FIBER
			LTE 700					4°							
			LTE 700					4°							
			LTE 1900					2°		(1)AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB					
			LTE AWS					2°							
			LTE AWS					2°							
	#11	FUTURE		FUTURE	FUTURE										
	#12	NEW	5G 850	COMMSCOPE	NNHH-65C-R4	137'-7"	320°	4°	0°	(1)AIRSCALE RRH 4T4R B5 160W AHCA	±285'	±35'	NEW	2	FIBER
			LTE WCS					2°		(1)AIRSCALE RRH 4T4R B30 100W AHNA					
GPS											±30'		NEW	1	1/2"

TOTAL # OF ANTENNAS: 6
(2 PER SECTOR)

TOTAL # OF RRH'S = 12 (4 PER SECTOR):
AIRSCALE RRH 4T4R B12/14/B29 370W AHLBBA, (1 PER SECTOR)
AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB, (1 PER SECTOR)
AIRSCALE RRH 4T4R B5 160W AHCA, (1 PER SECTOR)
AIRSCALE RRH 4T4R B30 100W AHNA, (1 PER SECTOR)

TOTAL # OF FUTURE ANTENNAS = 6 (2 PER SECTOR):
TOTAL # OF FUTURE RRHS = 0

NEW EQUIPMENT: YES EQUIPMENT PLATFORM SIZE: 18'-3" x 16'-5"

NOTES:
1. SUBCONTRACTOR SHALL COORDINATE COLOR CODING WITH THE MASTER COLOR CODE DOCUMENT.
2. INSTALL SURGE ARRESTORS ON NEW MAIN COAXIAL CABLES. GROUND TO NEAREST GROUND BAR.
3. SUB CONTRACTOR SHALL INSTALL A BRASS IDENTIFICATION TAG (1 1/2" IN DIAMETER WITH 1/4" STAMPED LETTERS AND NUMBERS. ONE AT THE ANTENNA PORT CONNECTION NEAR THE END OF THE JUMPER AND ONE ON EACH END OF THE JUMPER SERVING THE RADIO EQUIPMENT. EACH TAG WILL BE STAMPED WITH "ATT" AND THE ANTENNA PORT IDENTIFICATION NUMBER. TAGS SHALL BE ATTACHED WITH CORROSION PROOF UV RESISTANT WIRE OR CABLE-TY.

RF DESIGN NOTE:
This Antenna and Coax Cable schedule has been created using the RFDS dated 02-03-2020 Revision V1.00. All antenna design, zoning, structural analysis, permits and compliance submissions are coordinated with the fore mentioned document.

DCRA

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ENGINEER: C.S.
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GRAPHIC SCALE IN INCHES

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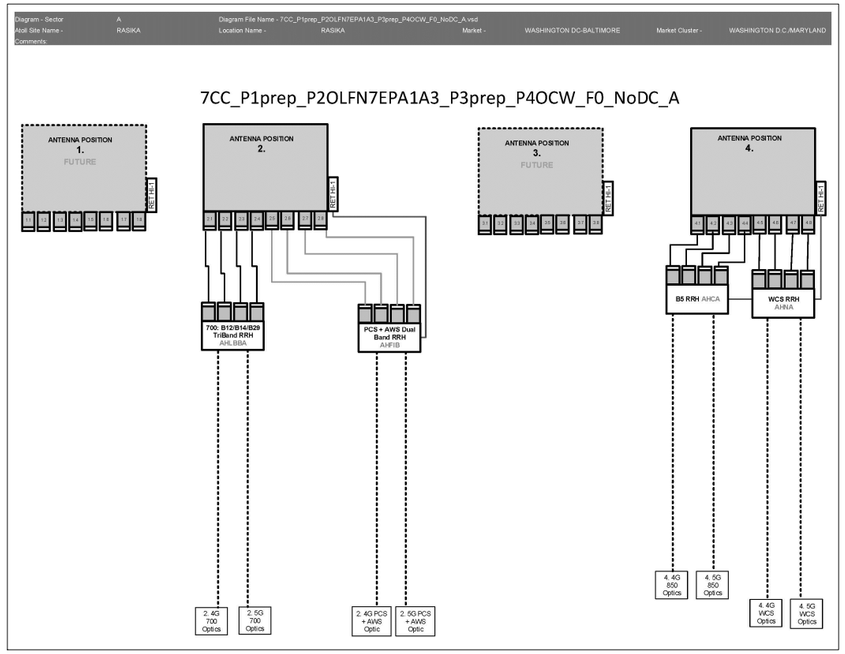
TITLE:

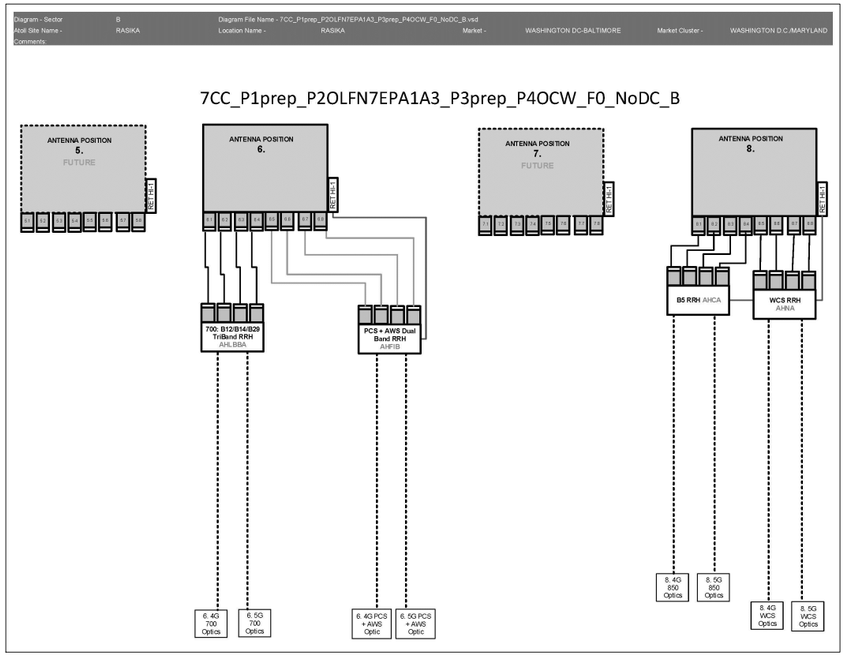
ANTENNA SCHEDULE

SHEET NUMBER:

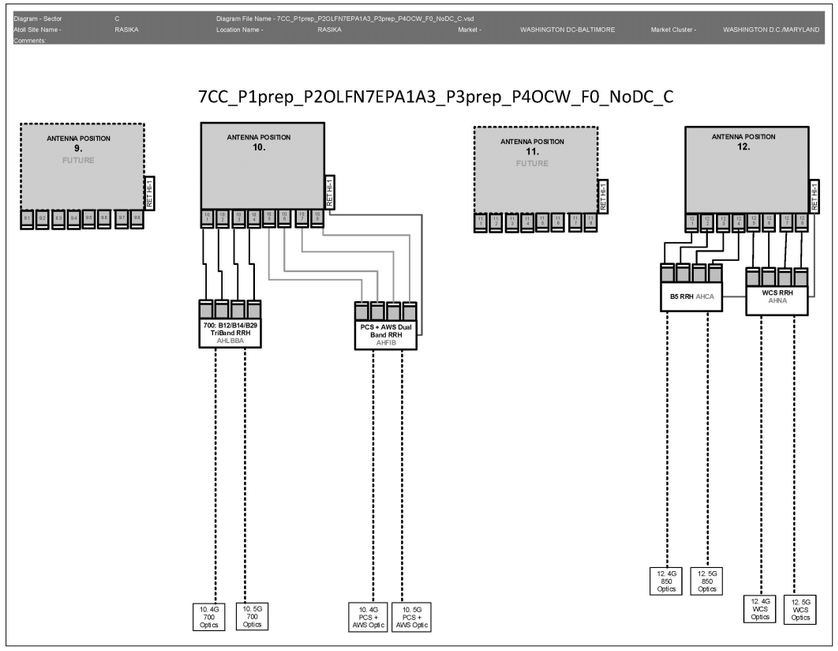
S-1



SECTOR A



SECTOR B



SECTOR C

BASED ON RF ENGINEERING DESIGN ENTITLED "WASHINGTON-D.C.-MARYLAND_WASHINGTON-DC-BALTIMORE_RASIKA_2020-New-Site_LTE-6C_sh733y_2251A0SE0V_15140160_280579_02-03-2020_Preliminary-Approved_v1.00.pdf"

RF PLUMBING DIAGRAM
SCALE: N.T.S.

1
S-2

DCRA

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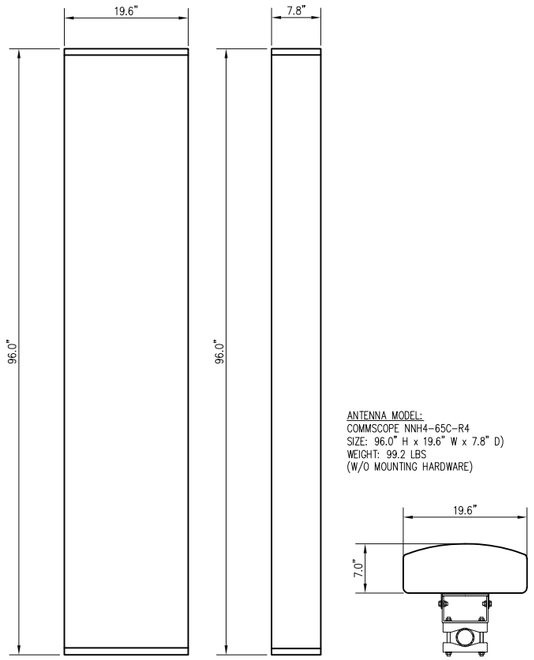
TITLE:

RF PLUMBING DIAGRAM

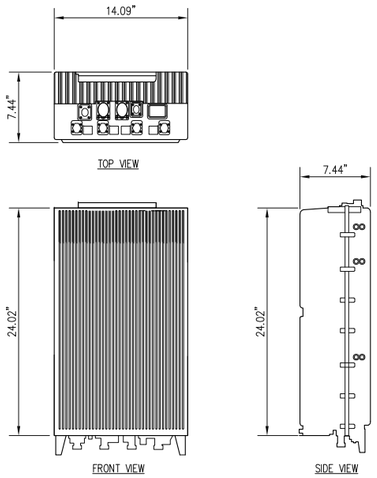
SHEET NUMBER:

S-2



COMMSCOPE NNH4-65C-R4 ANTENNA DETAIL

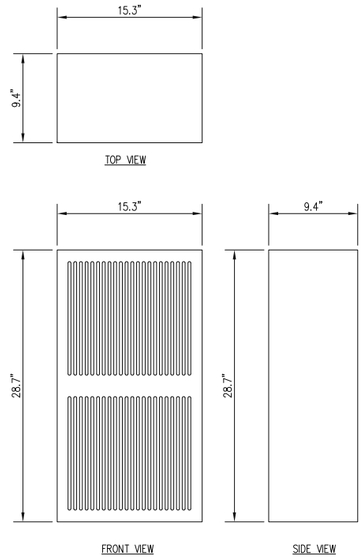
SCALE: 1"=1'-0" (1 S-3)



NOTE: DIMENSIONS/WEIGHT WITH DC SOLAR COVER.
WEIGHT: 101.4 LBS. (W/ MOUNTING HARDWARE)

NOKIA AIRSCALE TRIBAND RRH 4T4R B14/12/B29 370W AHLBBA

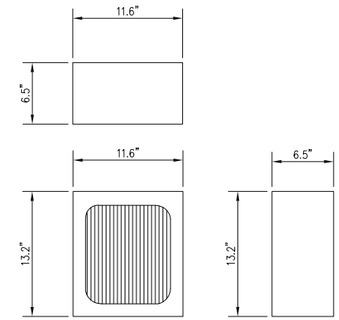
SCALE: 1-1/2"= 1'-0" (2 S-3)



NOTE: DIMENSIONS/WEIGHT WITH DC SOLAR COVER.
WEIGHT: 88 LBS. (W/ MOUNTING HARDWARE)

NOKIA AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB

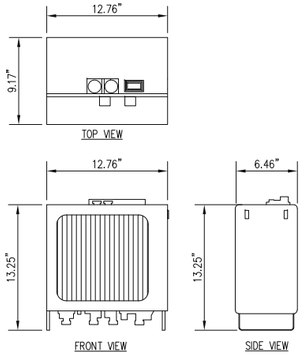
SCALE: 1-1/2"= 1'-0" (3 S-3)



NOTE: DIMENSIONS/WEIGHT WITH DC SOLAR COVER.
WEIGHT: 35 LBS. (W/ MOUNTING HARDWARE)

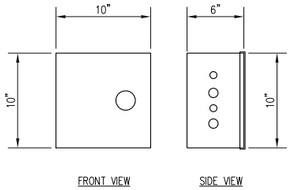
NOKIA AIRSCALE RRH 4T4R B5 160W AHCA

SCALE: 1-1/2"= 1'-0" (4 S-3)



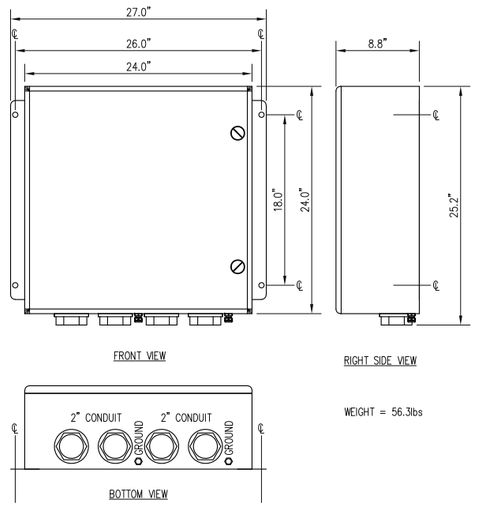
AIRSCALE RRH 4T4R B30 100W AHNA

SCALE: 1-1/2"= 1'-0" (5 S-3)



DISTRIBUTION BOX/ SLACK BOX HOFFMAN AHE10X10X6

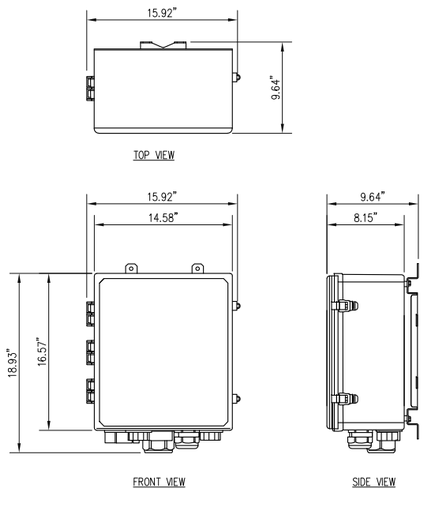
SCALE: 1-1/2"= 1'-0" (6 S-3)



WEIGHT = 56.3lbs

OVERVOLTAGE PROTECTION & POWER MANAGEMENT JUNCTION BOX DC12-48-60-0-25E

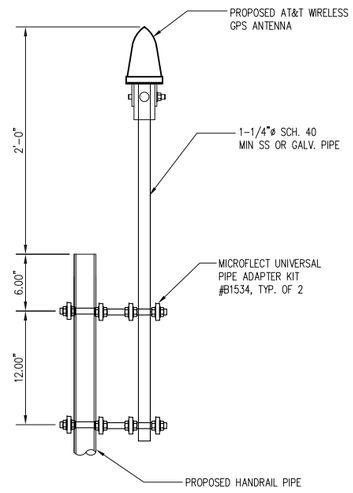
SCALE: 1-1/2"= 1'-0" (7 S-3)



WEIGHT : 34.9 LBS

RAYCAP DC9-48-60-24-PC16-EV

SCALE: N.T.S. (8 S-3)



GPS MOUNTING DETAIL

SCALE: 1-1/2"=1'-0" (9 S-3)

DCRA

SEAL:

DISTRICT OF COLUMBIA CAMILLE F. SHARSHAR 10657 REGISTERED PROFESSIONAL ENGINEER

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smartlink
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PHONE: (410) 582-8043
FAX: (410) 221-2962

PROJECT NO: 1152.400	
DESIGNER:	TMF
ENGINEER:	C.S.

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34"

0 1/2 1

GRAPHIC SCALE IN INCHES

FA NUMBER: 15140160
SITE ID: 2874
RASIKA
616 E STREET NW
WASHINGTON, D.C. 20004

SUBMITTALS

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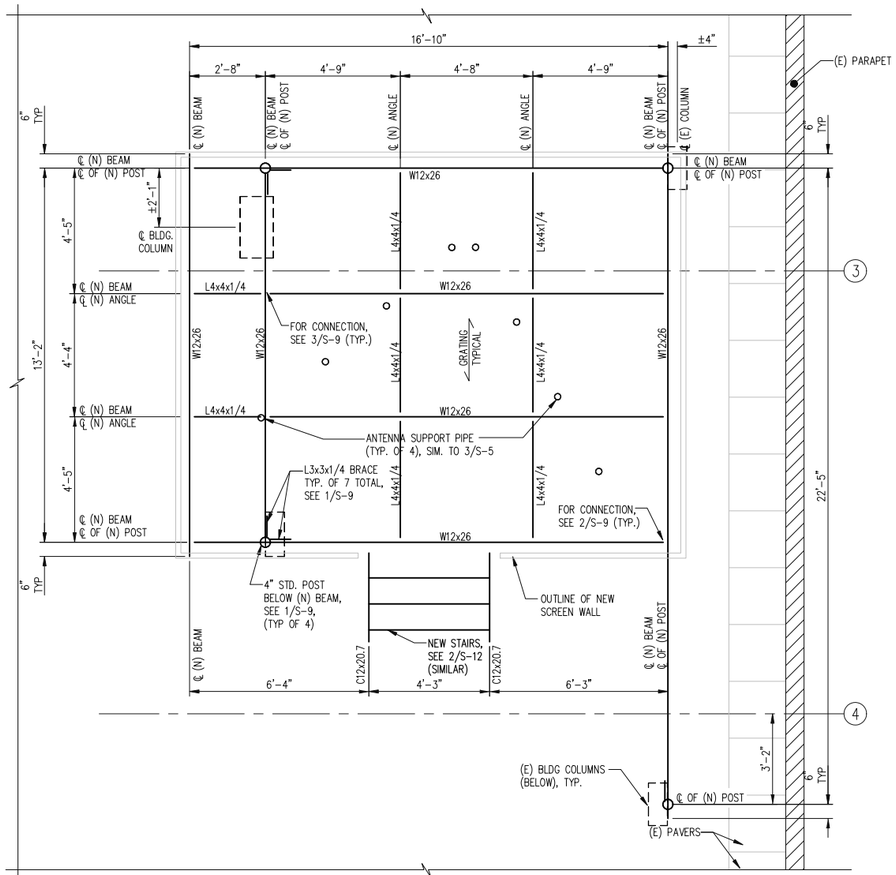
08-23-2021	ADD ANTENNA ENCLOSURE STAIRS & UPDATE DC9'S	5

TITLE:

ANTENNA AND RRH DETAILS

SHEET NUMBER:

S-3



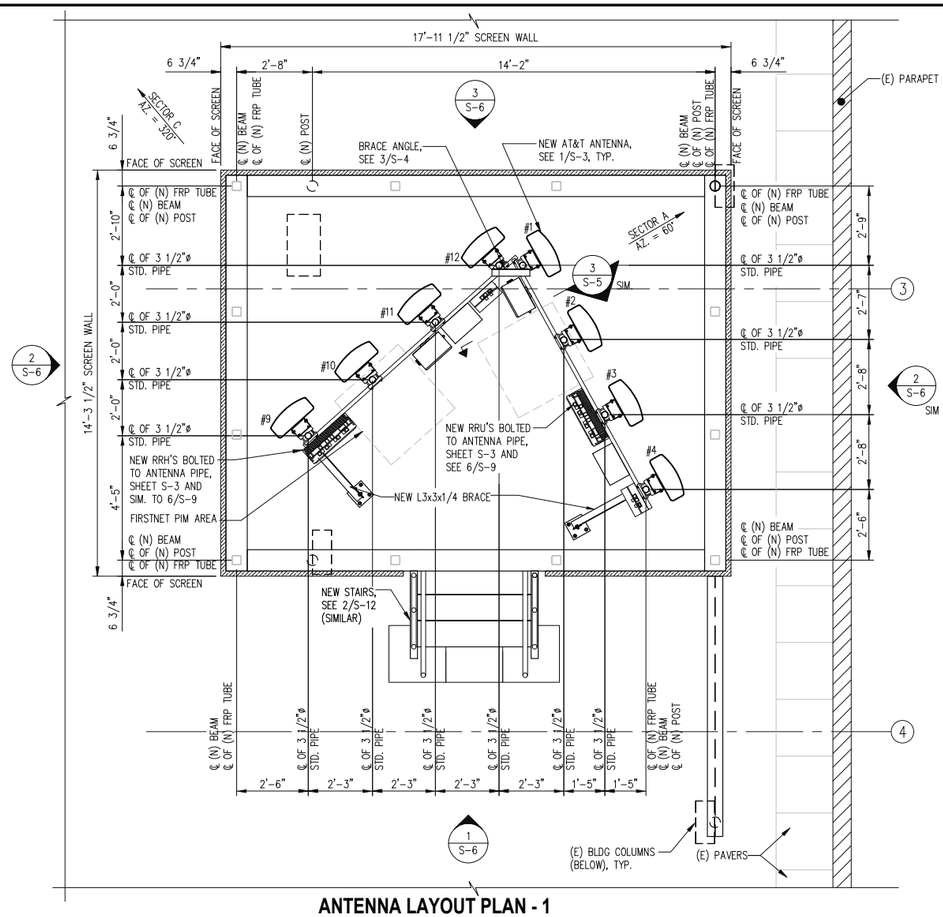
ANTENNA SUPPORT FRAME PLAN - 1 (SECTORS A & C)

SCALE: 3/8"=1'-0"

1 S-4

TRUE NORTH

1. CONTRACTOR SHALL FIELD VERIFY COLUMN LOCATIONS PRIOR TO FABRICATION. (FIELD DETERMINED COLUMN LOCATIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO FABRICATION (ENTREX COMMUNICATION SERVICES 202-408-0960))
2. THE CONTRACTOR SHALL PREPARE A SET OF STEEL SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO ORDERING/FABRICATING STEEL.
3. THE PLATFORM DESIGN LOAD IS 60 PSF. THE STAIR DESIGN LIVE LOAD IS 100 PSF.
4. REFER TO SHEET N-1 FOR STRUCTURAL NOTES.
5. GRATING SHALL BE 1 1/2" X 3/16" BEARING BARS 1 3/16" O.C. AND 1/8" X 3/4" CROSS BARS 4" O.C. SECURE GRATING TO STEEL FRAMING WITH GRATING CLAMPS 18" O.C. GRATING SHALL BE HOT DIP GALVANIZED AND ALL EDGES AND OPENINGS SHALL BE BANDED.
6. THE TOP OF PLATFORM STEEL FRAMING IS 2'-6" ABOVE THE EXISTING ROOF SURFACE. THE CLEARANCE BETWEEN BOTTOM OF STEEL AND ROOF IS 12" - 18".
7. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED. CLEAN WELDED AREAS WITH POWER TOOL. PAINT WELDED AREAS WITH TWO LAYERS OF GALVANIC PAINT.

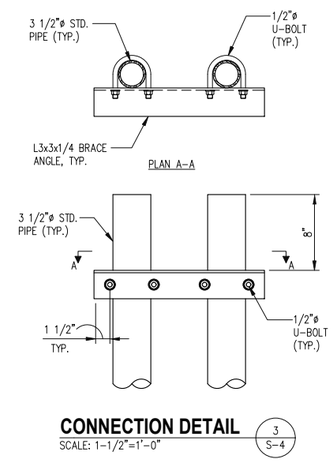


ANTENNA LAYOUT PLAN - 1 (SECTORS A & C)

SCALE: 3/8"=1'-0"

2 S-4

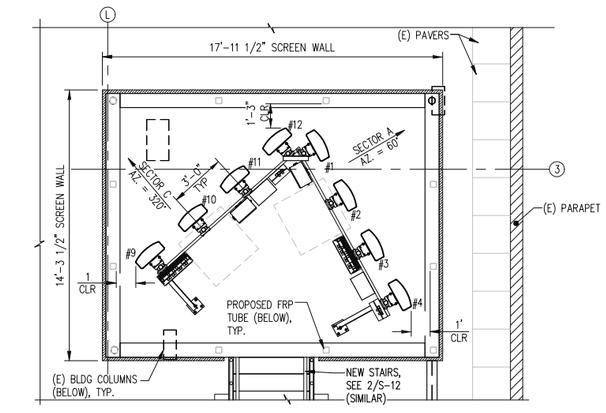
TRUE NORTH



CONNECTION DETAIL

SCALE: 1-1/2"=1'-0"

3 S-4



ANTENNA CLEARANCE DISTANCE PLAN - 1 (SECTORS A & C)

SCALE: 1/4"=1'-0"

4 S-4

TRUE NORTH

DCRA

SEAL:

DISTRICT OF COLUMBIA · CAMILLE F. SHARSMA · 10657 · REGISTERED PROFESSIONAL ENGINEER

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PROJECT NO:	1152.400
DESIGNER:	TMF
ENGINEER:	C.S.

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0 1/2 1

GRAPHIC SCALE IN INCHES

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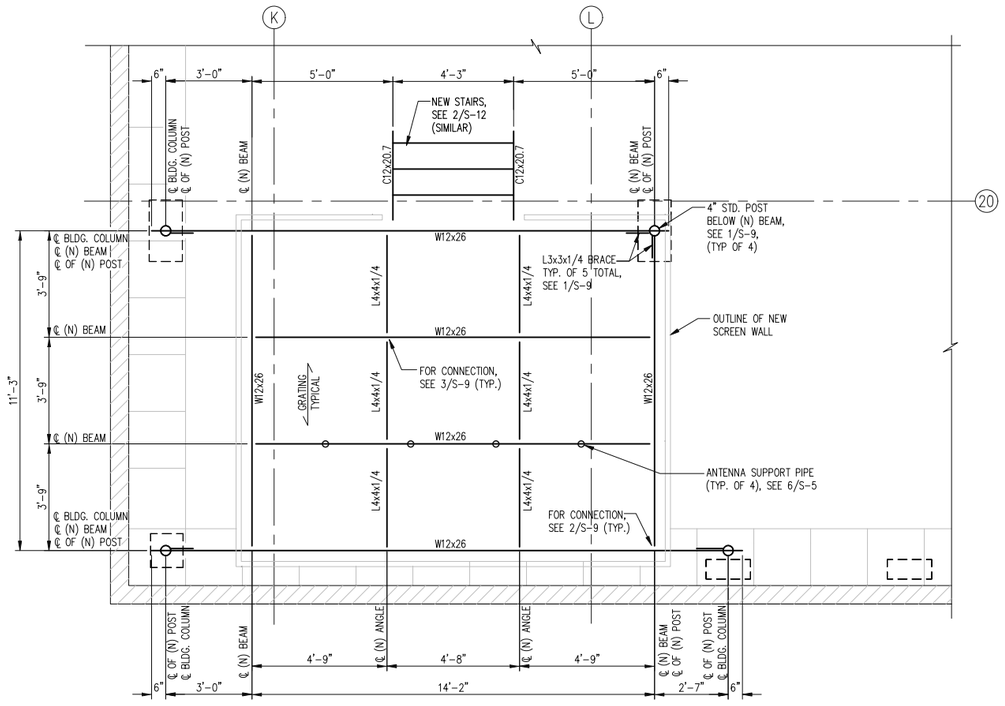
08-23-2021	ADD ANTENNA ENCLOSURE STAIRS & UPDATE DC9'S	5

TITLE:

ANTENNA SUPPORT FRAME AND LAYOUT PLANS (SECTORS A & C)

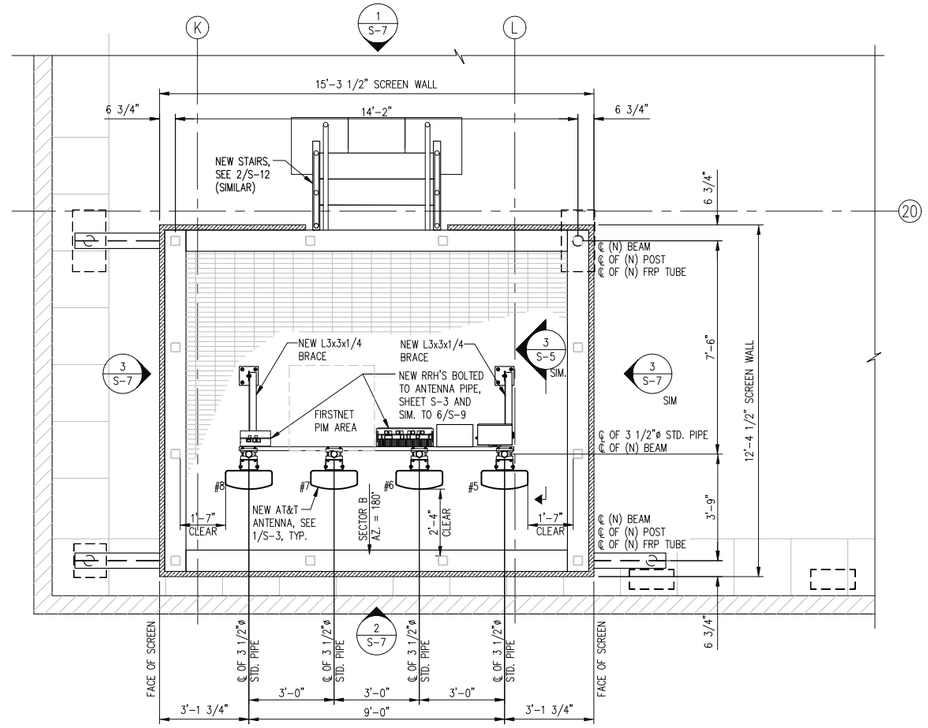
SHEET NUMBER:

S-4



ANTENNA SUPPORT FRAME PLAN - 2 (SECTOR B)

SCALE: 3/8"=1'-0" (1/S-5) TRUE NORTH



ANTENNA LAYOUT PLAN - 2 (SECTOR B)

SCALE: 3/8"=1'-0" (2/S-5) TRUE NORTH

NOTES:

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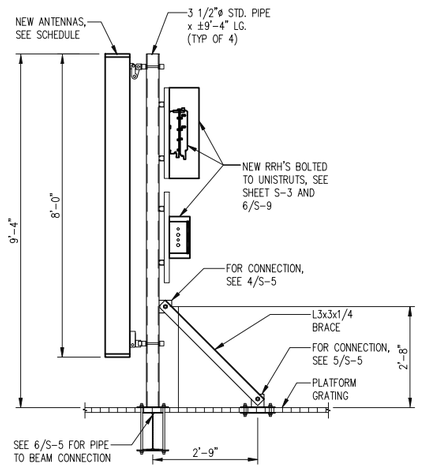
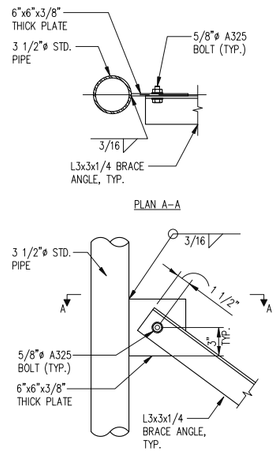


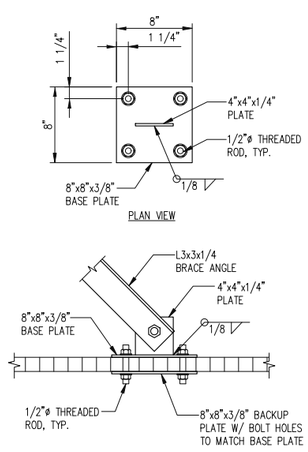
ANTENNA SUPPORT FRAME ELEVATION

SCALE: 1/2"=1'-0" (3/S-5)



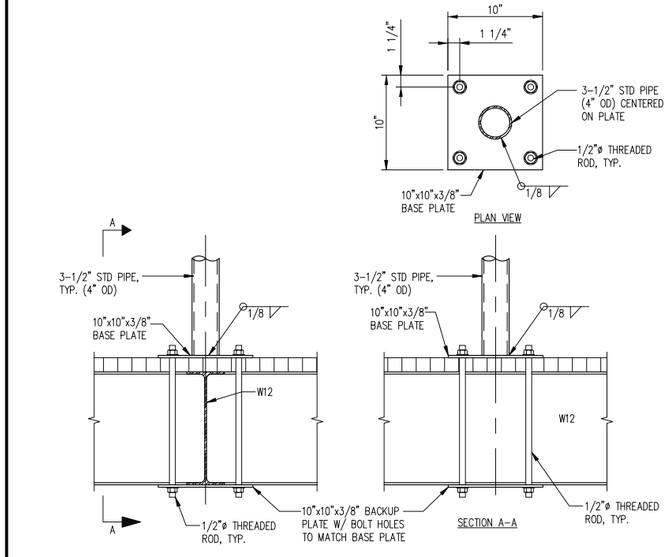
CONNECTION DETAIL

SCALE: 1-1/2"=1'-0" (4/S-5)



BRACE CONNECTION DETAIL

SCALE: 1-1/2"=1'-0" (5/S-5)



TYPICAL PIPE TO BEAM CONNECTION DETAIL

SCALE: 1-1/2"=1'-0" (6/S-5)

DCRA

SEAL:

DISTRICT OF COLUMBIA CAMILLE F. SHARMAN 10657 REGISTERED PROFESSIONAL ENGINEER

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PROJECT NO:	1152.400
DESIGNER:	TMF
ENGINEER:	C.S.

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0 1/2 1

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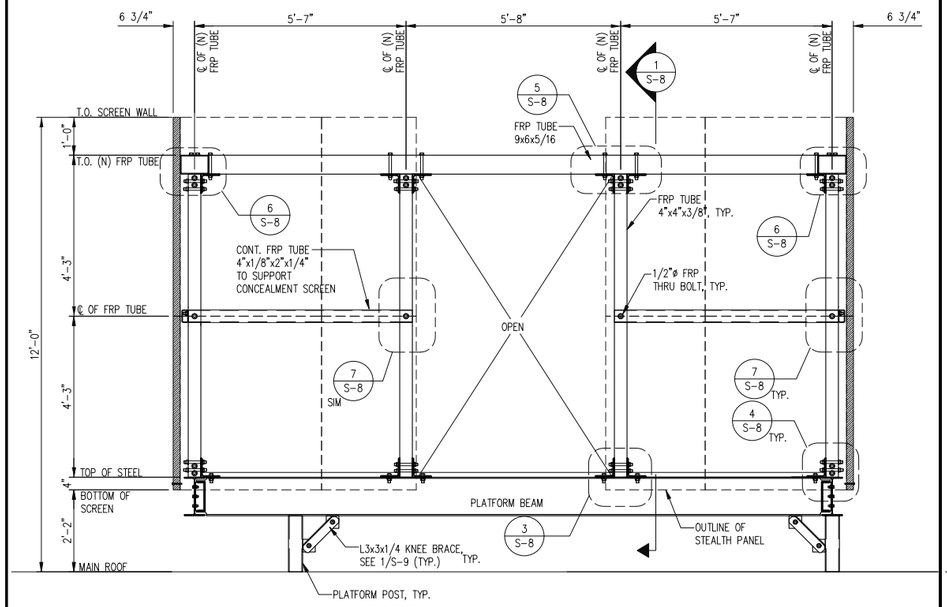
TITLE:

ANTENNA SUPPORT FRAME AND LAYOUT PLANS (SECTOR B)

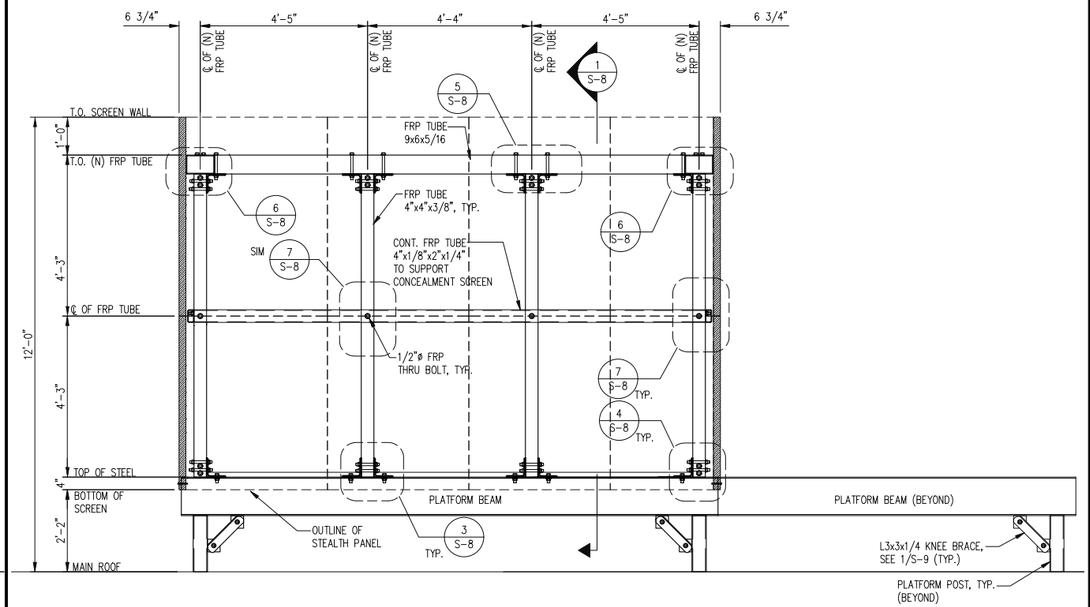
SHEET NUMBER:

S-5

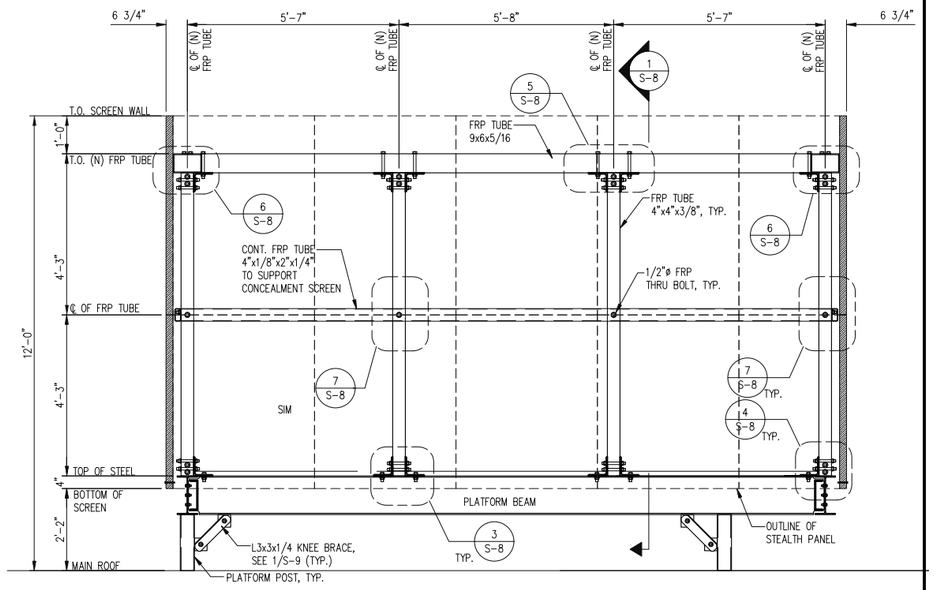


NOTE:
STAIRS NOT SHOWN FOR CLARITY.

ANTENNA PLATFORM ELEVATION - 1 (SECTORS A & C)
SCALE: 1/2" =1'-0"
1 S-6



ANTENNA PLATFORM ELEVATION - 1 (SECTORS A & C)
SCALE: 1/2" =1'-0"
2 S-6



ANTENNA PLATFORM ELEVATION - 1 (SECTORS A & C)
SCALE: 1/2" =1'-0"
3 S-6

DCRA

SEAL:

DISTRICT OF COLUMBIA
CAMILLE F. SHARSHAR
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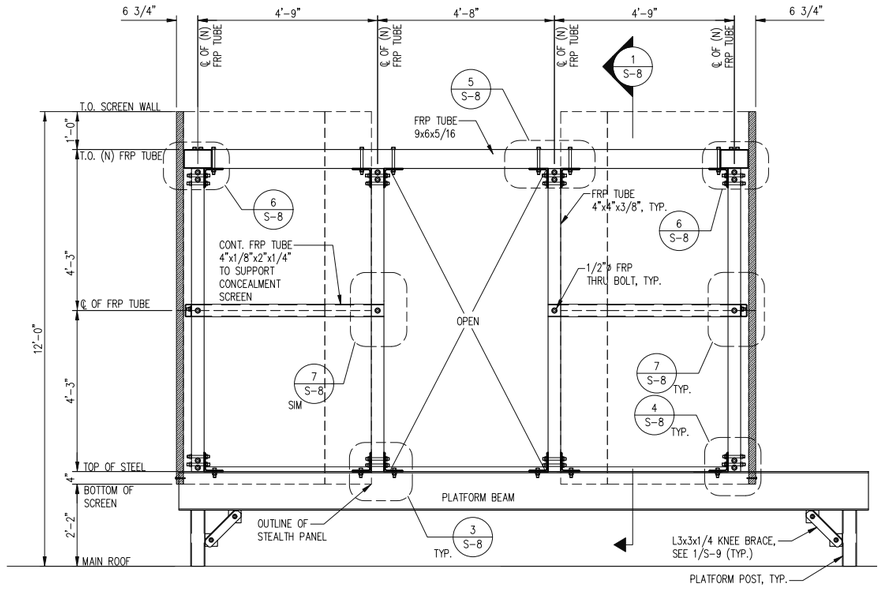
TITLE:

ANTENNA PLATFORM ELEVATIONS (SECTORS A & C)

SHEET NUMBER:

S-6

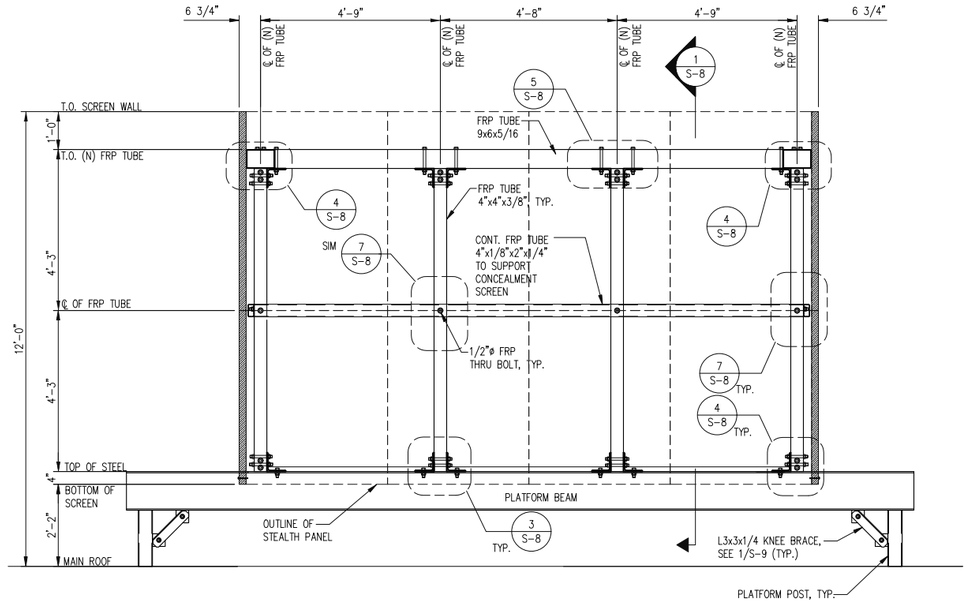


ANTENNA PLATFORM ELEVATION - 2 (SECTOR B)

SCALE: 1/2" =1'-0"

1 S-7

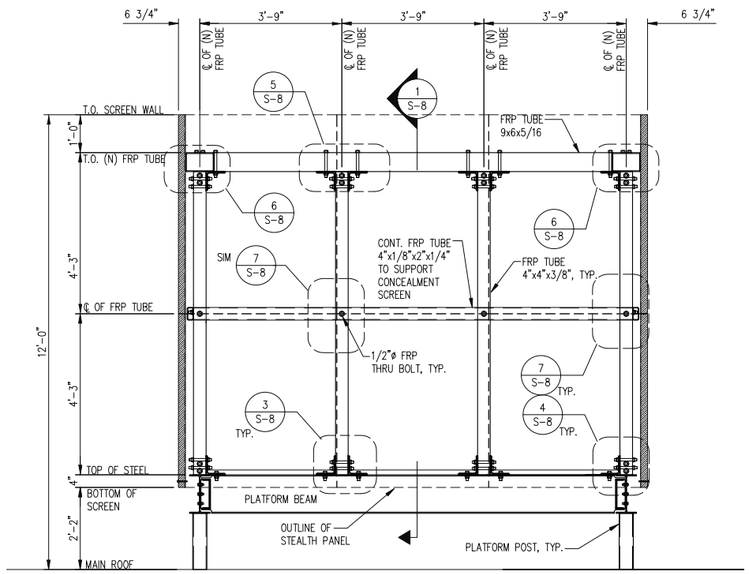
NOTE:
STAIRS NOT SHOWN FOR CLARITY.



ANTENNA PLATFORM ELEVATION - 2 (SECTOR B)

SCALE: 1/2" =1'-0"

2 S-7



ANTENNA PLATFORM ELEVATION - 2 (SECTOR B)

SCALE: 1/2" =1'-0"

3 S-7

DCRA

SEAL:

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CAMILLE F. SHARRAMA
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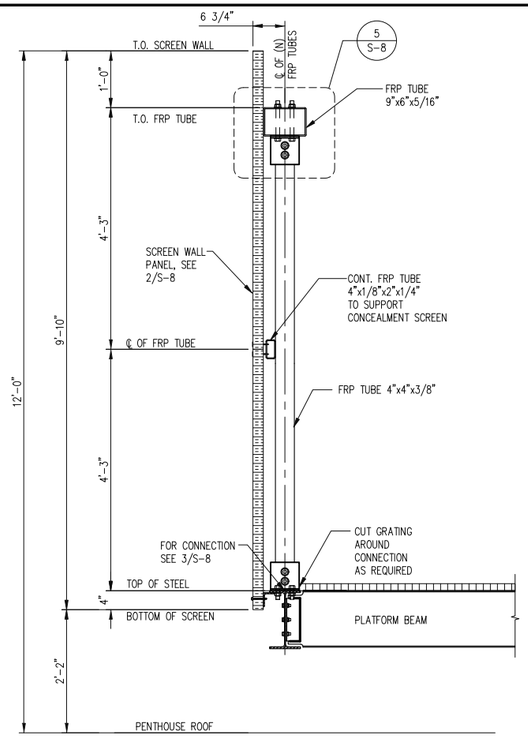
TITLE:

ANTENNA PLATFORM ELEVATIONS (SECTOR B)

SHEET NUMBER:

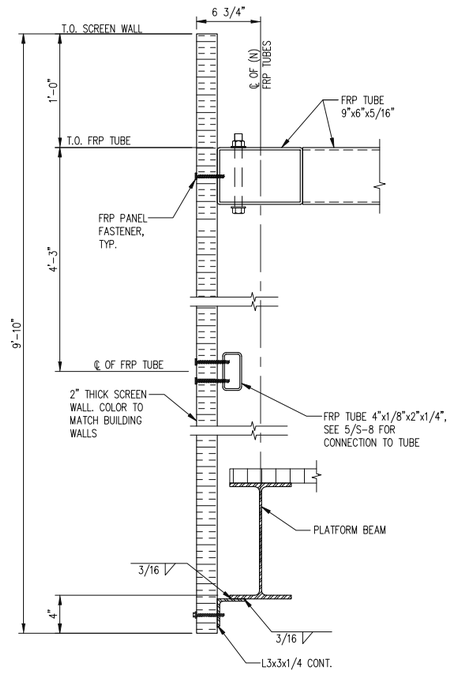
S-7



SCREEN WALL SECTION

SCALE: 3/4"=1'-0"

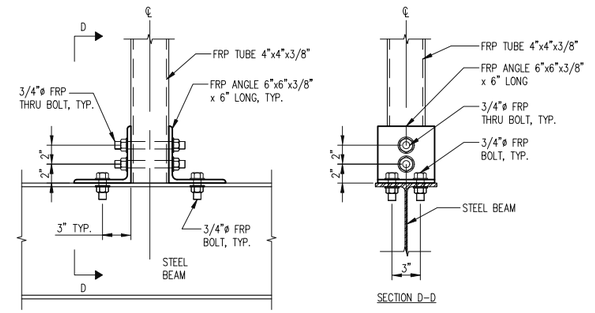
1 S-8



SCREEN PANEL DETAIL

SCALE: 1-1/2"=1'-0"

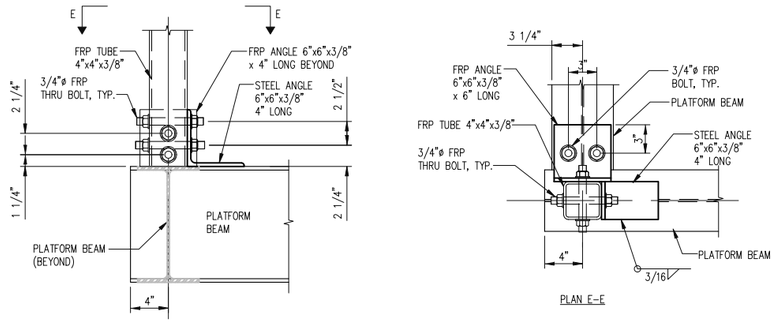
2 S-8



CONNECTION DETAIL

SCALE: 1-1/2"=1'-0"

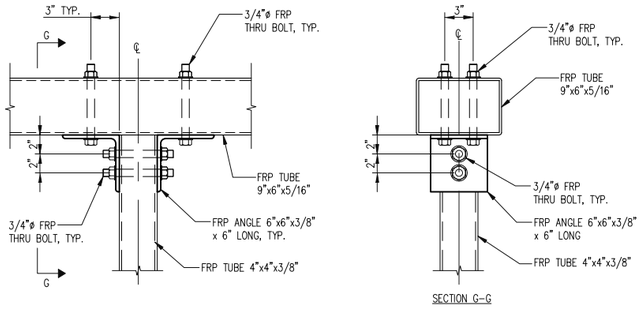
3 S-8



CONNECTION DETAIL

SCALE: 1-1/2"=1'-0"

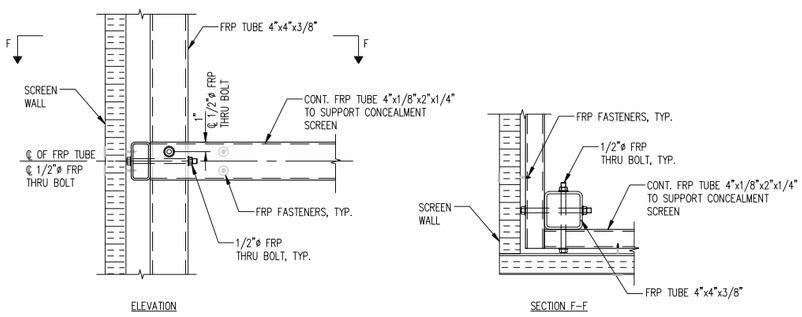
4 S-8



CONNECTION DETAIL

SCALE: 1-1/2"=1'-0"

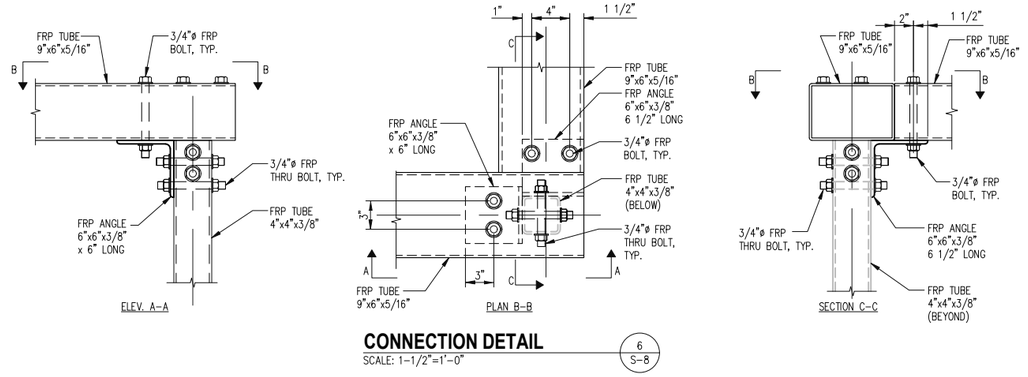
5 S-8



CONNECTION DETAIL

SCALE: 1-1/2"=1'-0"

7 S-8



CONNECTION DETAIL

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6 S-8

DCRA

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0 1/2 1

GRAPHIC SCALE IN INCHES

FA NUMBER: 15140160
SITE ID: 2874
RASIKA
616 E STREET NW
WASHINGTON, D.C. 20004

SUBMITTALS

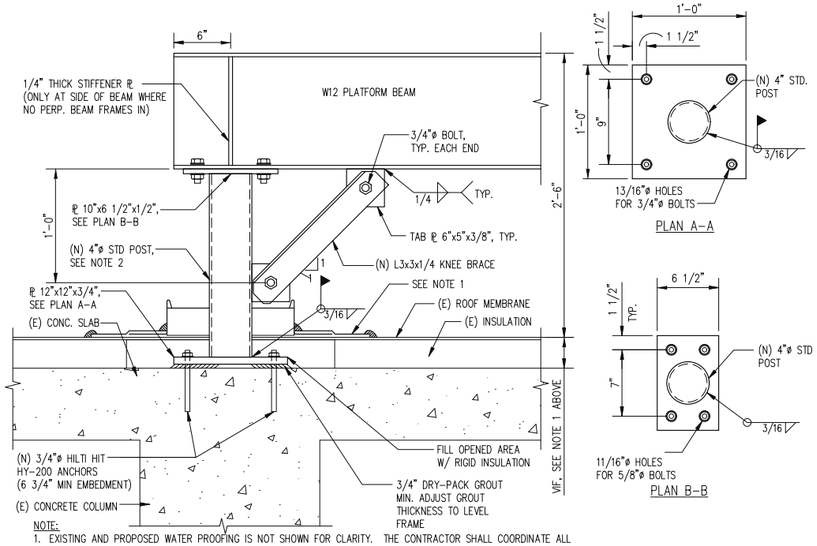
DATE	DESCRIPTION	REVISION
04-22-2020	ADDITIONAL REDLINES	1
11-09-2020	REVISE POWER SOURCE	2
11-11-2020	COMMENTS	3
04-19-2021	EXPAND ANTENNA EMCLOSURE / ANTENNA CLEARANCES	4
08-23-2021	ADD ANTENNA ENCLOSURE STAIRS & UPDATE DC9'S	5

TITLE:

SCREEN WALL DETAILS

SHEET NUMBER:

S-8

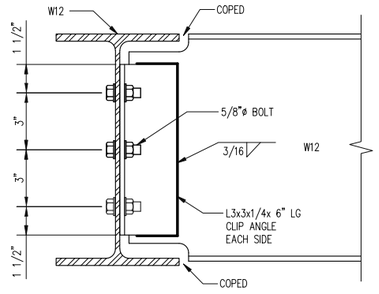


NOTE:

1. EXISTING AND PROPOSED WATER PROOFING IS NOT SHOWN FOR CLARITY. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE BUILDING OWNER'S ROOF CONTRACTOR WHO WILL COMPLETE ALL WORK ASSOCIATED WITH THE ROOF. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE BUILDING OWNER'S ROOF CONTRACTOR BEFORE INSTALLATION OF ANY ROOF.
2. VERIFY DEPTH OF INSULATION AT POST LOCATION, AND FIELD CUT LENGTH OF POST AS NEEDED. POST SHALL BE FIELD WELDED TO BASE PLATE AFTER REQUIRED PIPE LENGTH HAS BEEN DETERMINED. THE FIELD WELDING CAN BE DONE AT GROUND LEVEL TO AVOID WELDING ON ROOF.

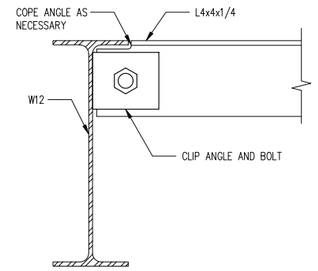
TYPICAL POST TO CONCRETE COLUMN CONNECTION

SCALE: 1 1/2"=1'-0" — 1 / S-9



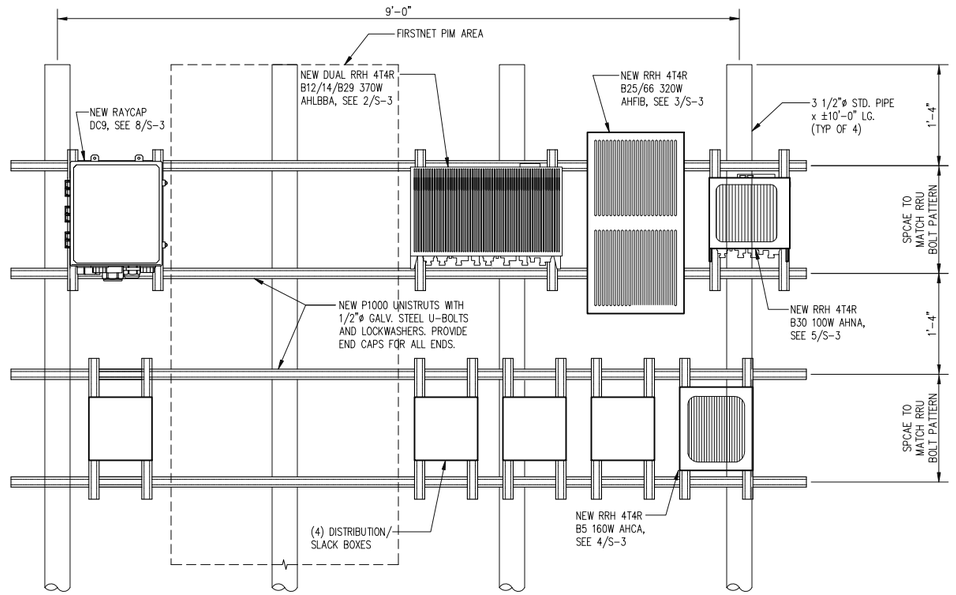
TYPICAL W12 TO W12 CONNECTION DETAIL

SCALE: 3"=1'-0" — 2 / S-9



TYPICAL ANGLE TO BEAM CONNECTION DETAIL

SCALE: 3"=1'-0" — 3 / S-9



NOTE:

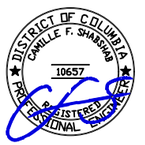
1. PROVIDE GALVANIZED P1000 UNISTRUTS AS NEEDED TO MOUNT ALL COMPONENTS.
2. ATTACH UNISTRUT TO BUILDING WALL WITH 3/8" HILTI HY-200 4" EMBEDMENT ANCHORS. OR TO EXISTING SCREEN WALL METAL SIDING WITH 3/8" HILTI HY-20 2 1/4" EMBEDMENT ANCHORS. SEAL ANCHOR PENETRATIONS WITH SILICONE. PROVIDE CAPS FOR ALL ENDS
3. ALL CABLES BETWEEN DISTRIBUTION BOXES AND RRHs SHALL BE IN FLEX CONDUITS.

TYPICAL EQUIPMENT MOUNTING DETAIL

SCALE: 1"=1'-0" — 6 / S-9

DCRA

SEAL:



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entrex
communication services, inc.
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PHONE: (202) 408-0960
FAX: (202) 408-0961

at&t
7150 STANDARD DRIVE
HANOVER, MD 21076

PROJECT NO:	1152.400
DESIGNER:	TMF
ENGINEER:	C.S.

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34"

0 1/2 1

GRAPHIC SCALE IN INCHES

smartlink
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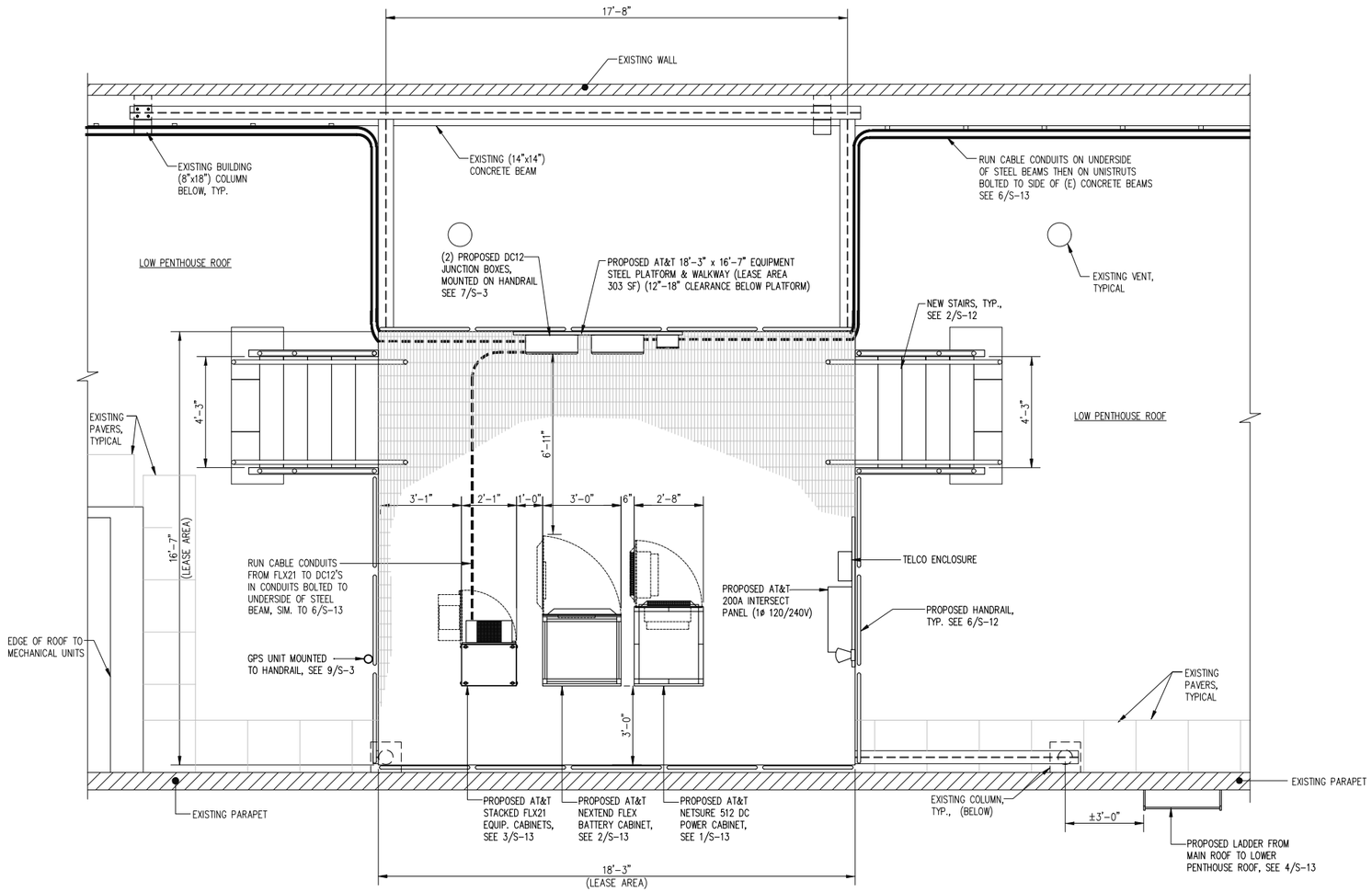
TITLE:

ANTENNA PLATFORM STRUCTURAL DETAILS

SHEET NUMBER:

S-9



EQUIPMENT PLATFORM PLAN

SCALE: 3/8"=1'-0"

1 / S-10

TRUE NORTH

DCRA

SEAL:

DISTRICT OF COLUMBIA
CAMILLE F. SHARSHAR
10657
REGISTERED PROFESSIONAL ENGINEER

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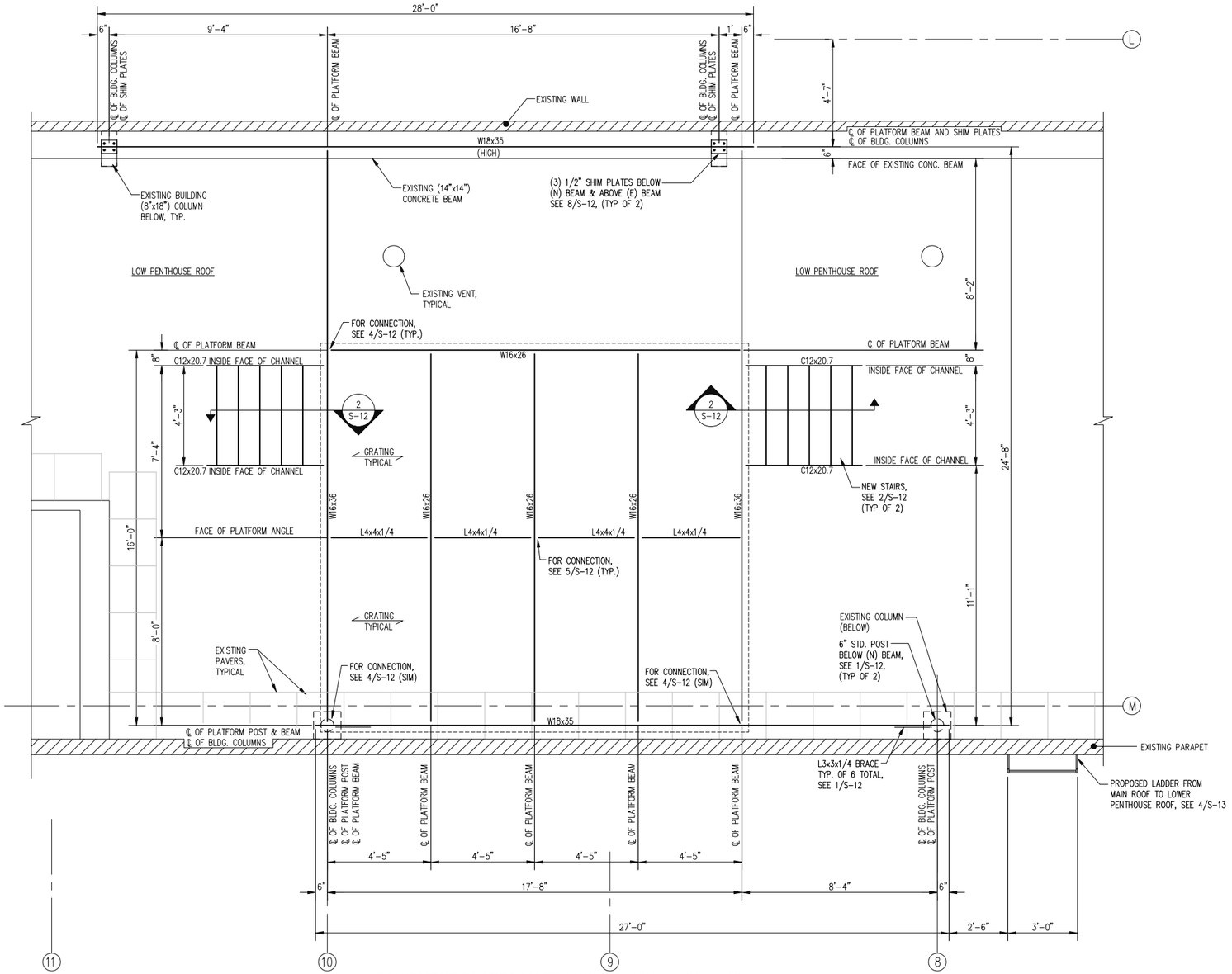
TITLE:

EQUIPMENT PLATFORM PLAN

SHEET NUMBER:

S-10



EQUIPMENT PLATFORM FRAMING PLAN

SCALE: 3/8"=1'-0"

1 S-11

TRUE NORTH

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY COLUMN LOCATIONS PRIOR TO FABRICATION. (FIELD DETERMINED COLUMN LOCATIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO FABRICATION (ENTREX COMMUNICATION SERVICES 202-408-0960))
2. THE CONTRACTOR SHALL PREPARE A SET OF STEEL SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO ORDERING/FABRICATING STEEL.
3. THE PLATFORM DESIGN LOAD IS 60 PSF. THE STAIR DESIGN LIVE LOAD IS 100 PSF.
4. GRATING SHALL BE 1 1/2" X 3/16" BEARING BARS 1 3/16" O.C. AND 1/8" X 3/4" CROSS BARS 4" O.C. SECURE GRATING TO STEEL FRAMING WITH GRATING CLAMPS 18" O.C. GRATING SHALL BE HOT DIP GALVANIZED AND ALL EDGES AND OPENINGS SHALL BE BANDED.
5. THE TOP OF PLATFORM STEEL FRAMING IS 3'-6" ABOVE THE EXISTING ROOF SURFACE. THE CLEARANCE BETWEEN BOTTOM OF STEEL AND ROOF IS 12" - 18".
6. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED. CLEAN WELDED AREAS WITH POWER TOOL. PAINT WELDED AREAS WITH TWO LAYERS OF GALVANIC PAINT.
7. REFER TO SHEET N-1 FOR STRUCTURAL NOTES.
8. SEE SHEET S-12 FOR TYPICAL BEAM CONNECTION DETAILS.

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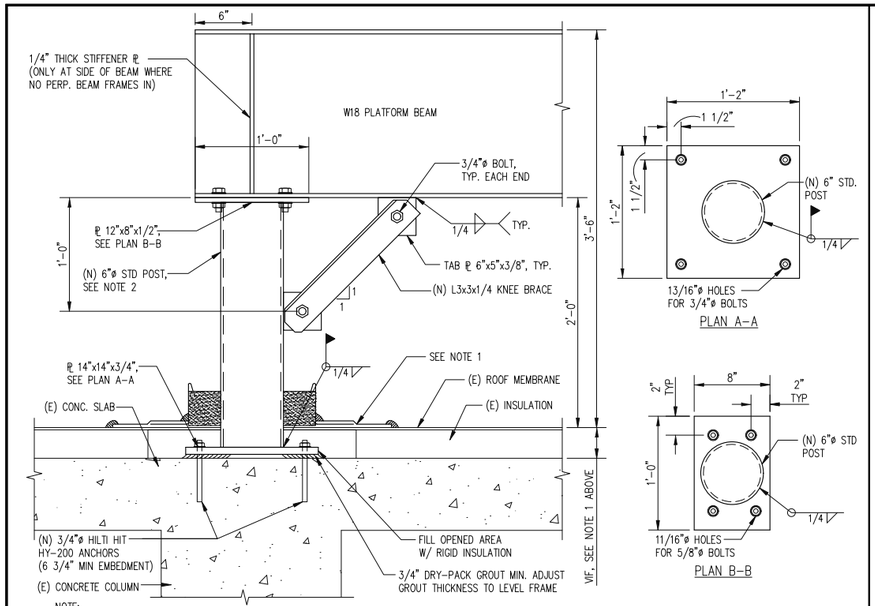
TITLE:

EQUIPMENT PLATFORM FRAMING PLAN

SHEET NUMBER:

S-11



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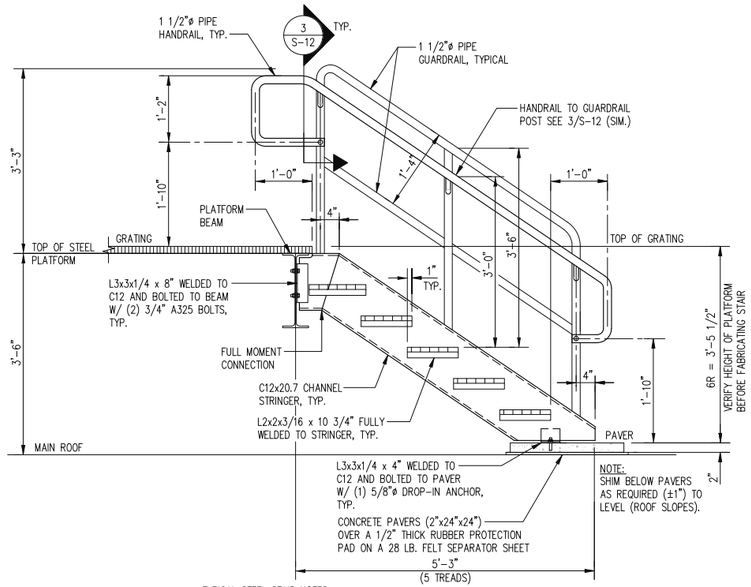
TYPICAL POST TO CONCRETE COLUMN CONNECTION

SCALE: 1 1/2"=1'-0" — 1 / S-12

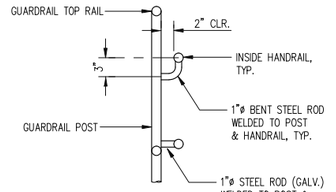


TYPICAL STEEL STAIR NOTES:

1. ALL RAILS AND POSTS ARE 1 1/2" SCHED. 40 GALV. STEEL PIPE. POSTS TO BE CENTERED ON THE TOP FLANGE OF CHANNEL OR STRINGER, TYP.
2. ALL RAIL TO POST INTERSECTIONS AND POST TO STRINGER TO BE FULLY WELDED 3/16" FILLET WELD ALL AROUND, GROUND SMOOTH. RAIL ENDS WHERE EXPOSED, TO BE CAPPED AND FULLY WELDED.
3. CLEAN WELDED AREAS WITH POWER TOOL AND PAINT WITH 2 LAYERS OF GALVANIC PAINT, TYP.

STEEL STAIR DETAIL

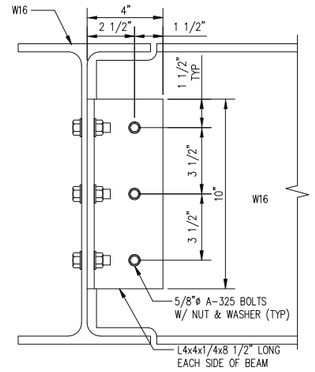
SCALE: 3/4"=1'-0" — 2 / S-12



SEE 2/S-12 FOR DIMENSIONS NOT NOTED.

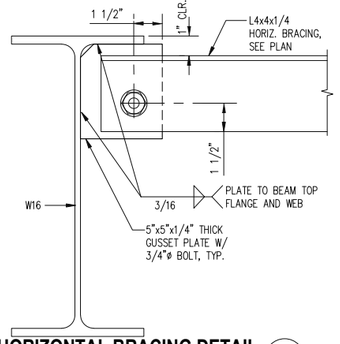
STAIR HANDRAIL DETAIL

SCALE: 1"=1'-0" — 3 / S-12



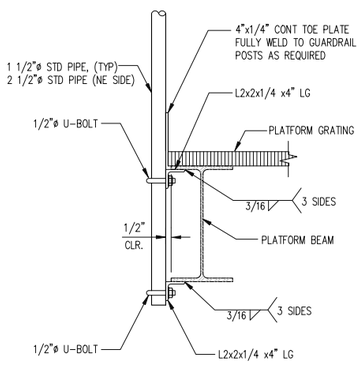
SECTION

SCALE: 3"=1'-0" — 4 / S-12



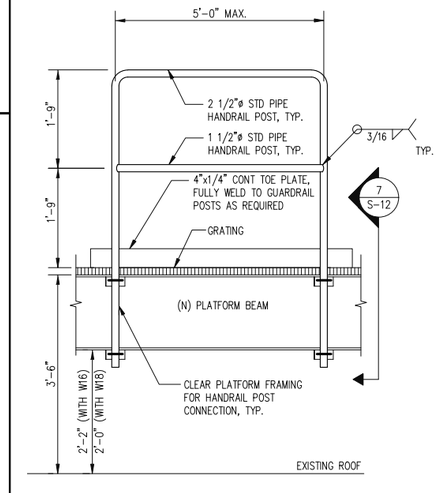
HORIZONTAL BRACING DETAIL

SCALE: 3"=1'-0" — 5 / S-12



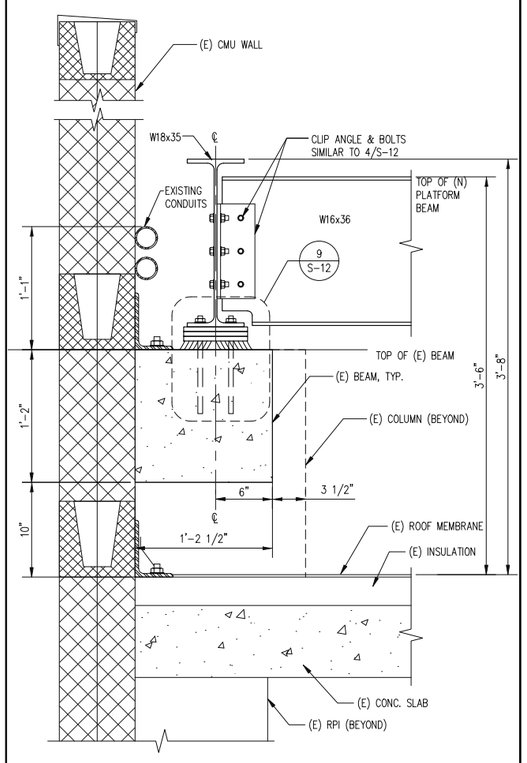
HANDRAIL CONNECTION DETAIL

SCALE: 1-1/2"=1'-0" — 7 / S-12



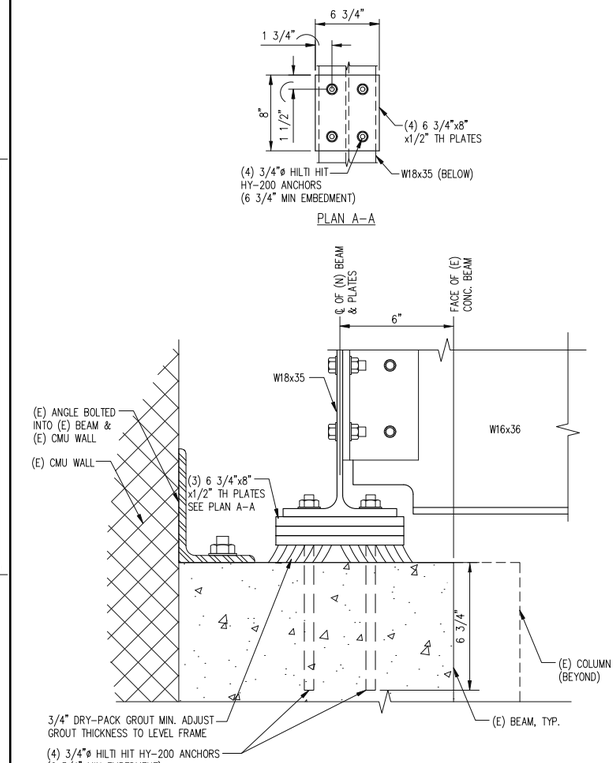
GUARDRAIL DETAIL

SCALE: 3/4"=1'-0" — 6 / S-12



POST CONENCTION TO (E) BEAM

SCALE: 1 1/2"=1'-0" — 8 / S-12



CONNECTION DETAIL

SCALE: 3"=1'-0" — 9 / S-12

DCRA

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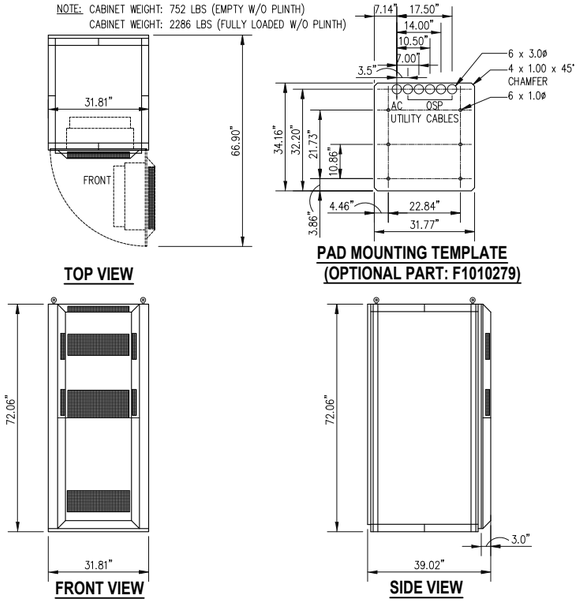
TITLE:

EQUIPMENT PLATFORM STRUCTURAL DETAILS

SHEET NUMBER:

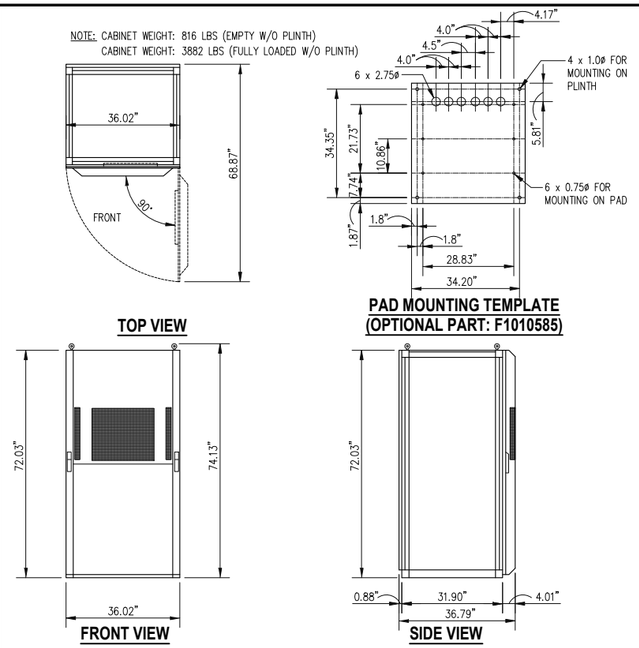
S-12



OUTDOOR NETSURE 512 DC POWER CABINET DETAIL

SCALE: 1/2"=1'-0"

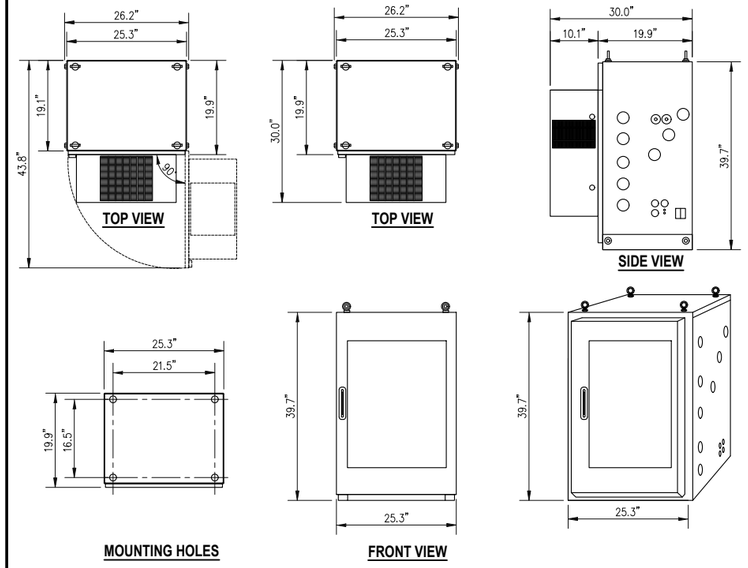
1 S-13



OUTDOOR NETXTEND FLEX BATTERY CABINET DETAIL

SCALE: 1/2"=1'-0"

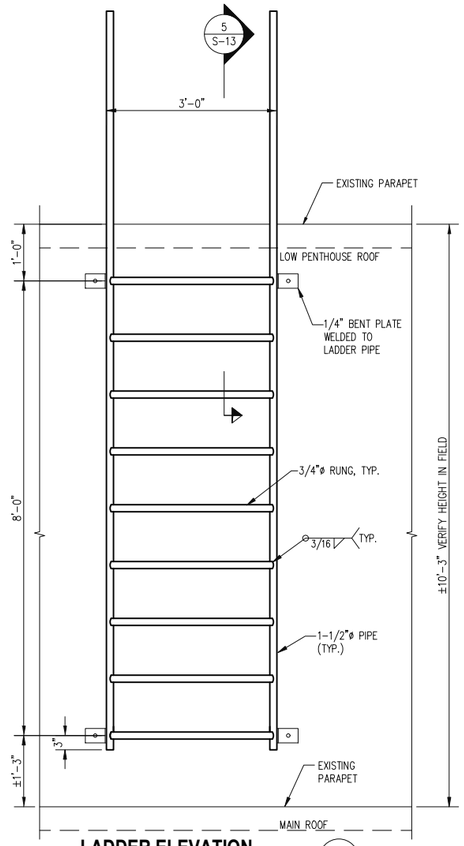
2 S-13



FLX21 CABINET DETAIL

SCALE: 3/4"=1'-0"

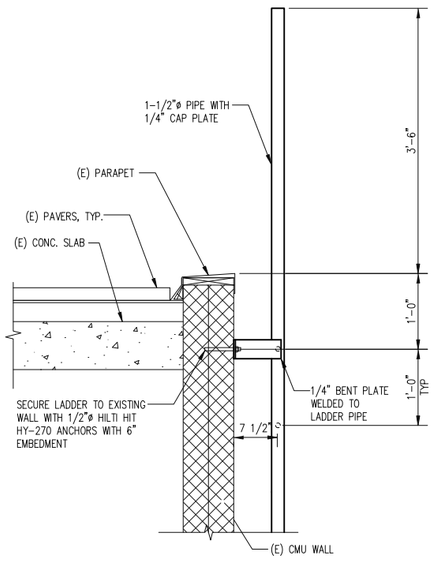
3 S-13



LADDER ELEVATION

SCALE: 3/4" = 1'-0"

4 S-13



LADDER DETAIL

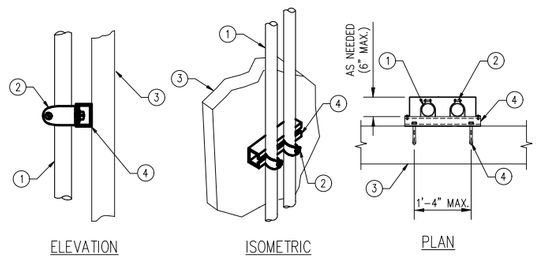
SCALE: 1" = 1'-0"

5 S-13

NOTES:
1. USE STANDARD STAINLESS STEEL HARDWARE FOR WALL CONNECTIONS.
2. SPACE SUPPORTS @ 4'-0" ON CENTER MAXIMUM.
3. DETAIL APPLIES TO BOTH VERTICAL AND HORIZONTAL CONDUIT RUNS.
4. COVER NOT SHOWN IN ELEVATION & ISOMETRIC VIEWS FOR CLARITY

UNISTRUT MOUNTING CHART	
WALL CONSTRUCTION TYPE	USE
HOLLOW	3/8"ø TOGGLE BOLT
HOLLOW, AT STUD	3/8"ø LAG SCREW
CONCRETE BLOCK (HOLLOW)	3/8"ø HILTI HY-70 (MIN. EMBEDMENT 2-1/2")
CONCRETE (SOLID)	3/8"ø HILTI HY-200 (MIN. EMBEDMENT 2-1/2")

1. CONDUIT OR PIPE
2. BUTTERFLY CLAMP AS REQUIRED
3. EXISTING WALL ASSEMBLY
4. UNISTRUT P1000 'T' SERIES LENGTH BASED ON NUMBER OF CONDUIT TO BE MOUNTED
5. ANCHOR, SEE TABLE ABOVE
5. 20 GA. SHEET METAL COVER PAINTED TO MATCH WALL COLOR & BOLTED TO UNISTRUTS

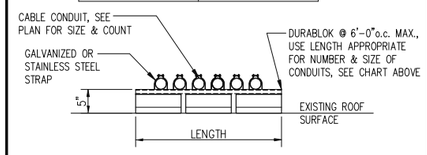


COVERED CONDUIT OR CONDUIT ON WALL DETAIL

SCALE: 3/4"=1'-0"

6 S-13

DURABLOCK DB SERIES LENGTH CHART	
PART NUMBER	LENGTH
DB5	4.8"
DB10	9.6"
DB20	20.2"
DB30	30.8"
DB40	41.4"



CABLE CONDUIT SUPPORT DETAIL

SCALE: 3/4"= 1'-0"

7 S-13

DCRA

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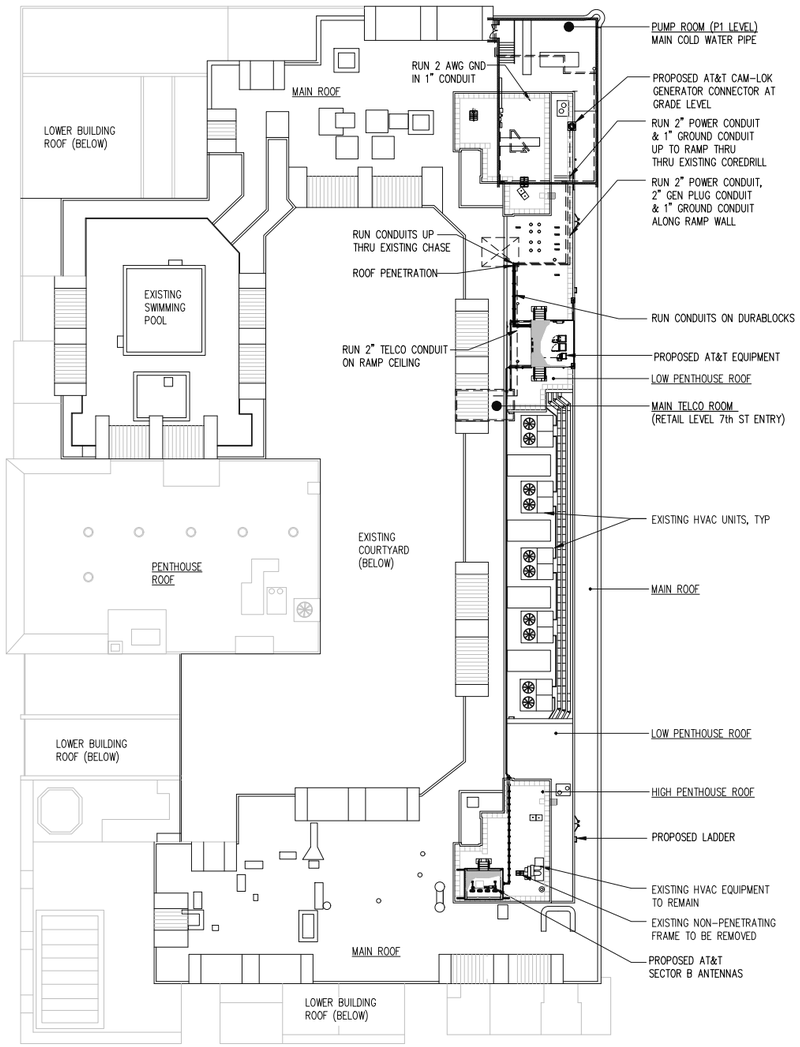
EQUIPMENT CABINET, LADDER & CONDUIT DETAILS

SHEET NUMBER:

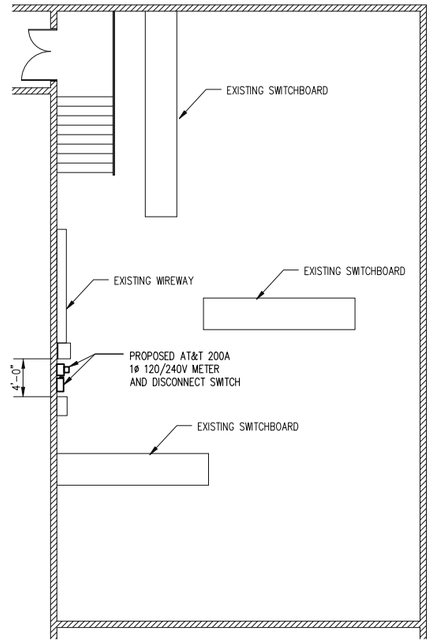
S-13



UTILITY ROUTING PLAN

SCALE: 1" = 30'-0"

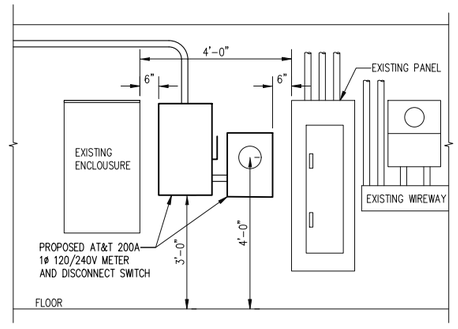
1 E-1 — TRUE NORTH



MAIN ELECT ROOM PLAN

SCALE: 1/8" = 1'-0"

2 E-1 — TRUE NORTH



ELECTRICAL EQUIPMENT ELEVATION

SCALE: 1/2" = 1'-0"

3 E-1

PROPOSED AT&T PANEL

120/240 VOLTS 1 PHASE 3 WIRE 200 AMP MCB

DESCRIPTION	VA	BKR	CKT	ø A	ø B	CKT	BKR	VA	DESCRIPTION
RECTIFIER 1&2	1300	30	1	1300		2		–	SPACE
	1300		3		1300	4		–	SPACE
RECTIFIER 3&4	1300	30	5	1480		6	15	180	GFCI
	1300		7		1420	8	20	120	LIGHTS
RECTIFIER 5&6	1300	30	9	1300		10		–	SPACE
	1300		11		1300	12		–	SPACE
RECTIFIER 7&8	1300	30	13	1300		14		–	SPACE
	1300		15		1300	16		–	SPACE
RECTIFIER 9&10	1300	30	17	1300		18		–	SPACE
	1300		19		1300	20		–	SPACE
SPACE	–		21			22		–	SPACE
SPACE	–		23			24		–	SPACE
SPACE	–		25			26		–	SPACE
SPACE	–		27			28		–	SPACE
SPACE	–		29			30		–	SPACE
SPACE	–		31			32		–	SPACE
SPACE	–		33			34		–	SPACE
SPACE	–		35			36		–	SPACE
SPACE	–		37			38		–	SPACE
SPACE	–		39			40		–	SPACE
PHASE TOTALS:				6680	6620	TOTAL VA: 13300			

PANELBOARD CAPACITY: 48 kVA
PANELBOARD CONNECTED LOAD: 13.3 kVA
13.3 kVA x 1.25 = 16.63 kVA

THE CONNECTED LOAD DOES NOT EXCEED THE PANELBOARD'S CAPACITY.

BREAKER POSITION	BREAKER RATING	DESCRIPTION	-48V BUS
1	100	AIRSCALE RRH 4T4R B12/14/29	
2	100	AIRSCALE RRH 4T4R B12/14/29	
3	100	AIRSCALE RRH 4T4R B12/14/29	
4			
5	20	AIRSCALE RRH 4T4R B30 100W AHNA	
6	20	AIRSCALE RRH 4T4R B30 100W AHNA	
7	20	AIRSCALE RRH 4T4R B30 100W AHNA	
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20	20	SAID	
21	20	SAID	
22	20	TRANSPORT NID	
23	40	FSM4	
24	40	FSM4	

BREAKER POSITION	BREAKER RATING	DESCRIPTION	-48V BUS
1	100	FLEX21	
2	100	FLEX21	
3			
4	50	AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB	
5	50	AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB	
6	50	AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB	
7			
8	25	AIRSCALE RRH 4T4R B5 160W AHCA	
9	25	AIRSCALE RRH 4T4R B5 160W AHCA	
10	25	AIRSCALE RRH 4T4R B5 160W AHCA	
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

DC POWER BREAKER SCHEDULE

SCALE: N.T.S.

DCRA

SEAL:

DISTRICT OF COLUMBIA — CAMILLE F. SHARMAN — 10657 — REGISTERED PROFESSIONAL ENGINEER

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PROJECT NO:	1152.400
DESIGNER:	N.B.
ENGINEER:	C.S.

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34"

0 1/2 1

GRAPHIC SCALE IN INCHES

FA NUMBER: 15140160
SITE ID: 2874
RASIKA
616 E STREET NW
WASHINGTON, D.C. 20004

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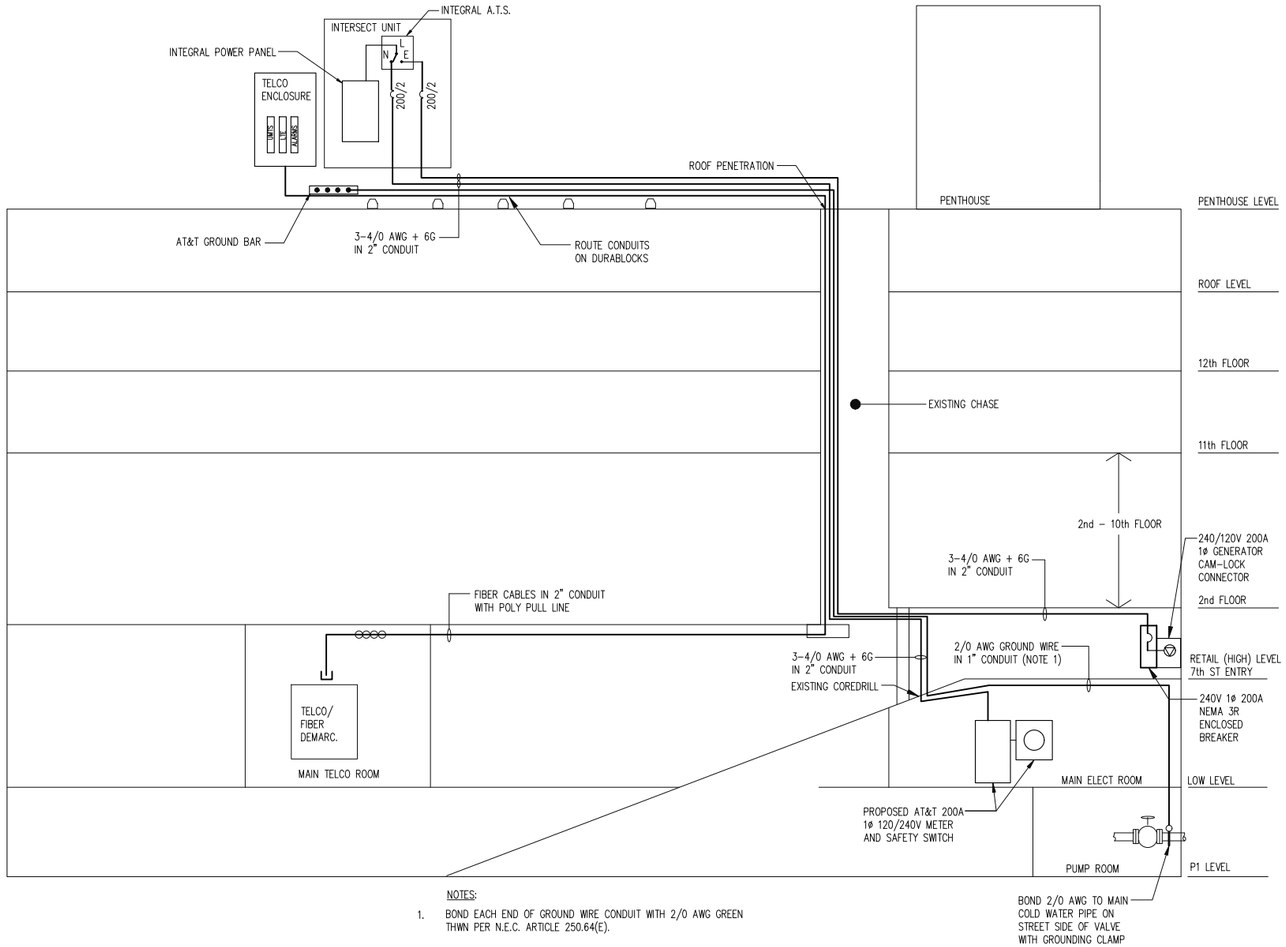
08-23-2021	ADD ANTENNA ENCLOSURE STAIRS & UPDATE DC9'S	5

TITLE:

ELECTRICAL PLANS ELEVATION AND PANEL SCHEDULES

SHEET NUMBER:

E-1



NOTES:
1. BOND EACH END OF GROUND WIRE CONDUIT WITH 2/0 AWG GREEN THWN PER N.E.C. ARTICLE 250.64(E).

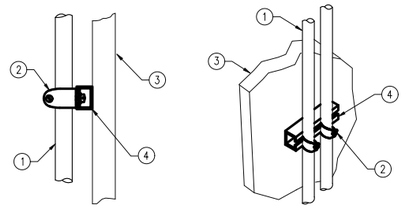
UTILITY RISER DIAGRAM
SCALE: N.T.S.

1 / E-2

NOTES:
1. USE STANDARD STAINLESS STEEL HARDWARE FOR WALL CONNECTIONS.
2. SPACE SUPPORTS @ 6'-0" ON CENTER MAXIMUM.
3. DETAIL APPLIES TO BOTH VERTICAL AND HORIZONTAL CONDUIT RUNS.

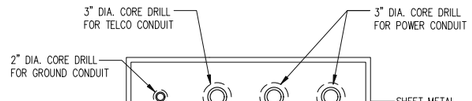
UNISTRUT MOUNTING CHART	
WALL CONSTRUCTION TYPE	USE
HOLLOW	3/8"ø TOGGLE BOLT
HOLLOW, AT STUD	3/8"ø LAG SCREW
CONCRETE BLOCK (HOLLOW)	3/8"ø HILTI HY-70 (MIN. EMBEDMENT 2-1/2")
CONCRETE (SOLID)	3/8"ø HILTI HY-200 (MIN. EMBEDMENT 2-1/2")

1. CONDUIT OR INNERDUCT
2. BUTTERFLY CLAMP AS REQUIRED
3. EXISTING WALL ASSEMBLY
4. UNISTRUT P1000 'T' SERIES LENGTH BASED ON NUMBER OF CONDUIT TO BE MOUNTED



CONDUIT ON WALL DETAIL
SCALE: 3/4"=1'-0"

2 / E-2



PLAN

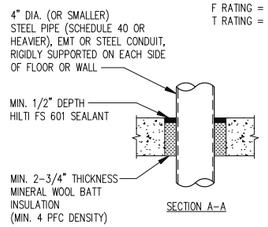
SECTION

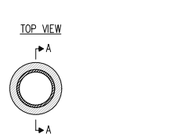
ROOF PENETRATION DETAIL
SCALE: 1 1/2" = 1'-0"

4 / E-2

U.L. SYSTEM NO. CAJ1177
METAL PIPE/CONDUIT THROUGH CONCRETE FLOOR OR WALL

F RATING = 2 HR
T RATING = 0 HR

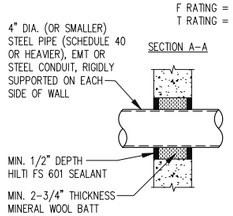


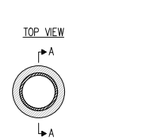


FLOOR OR WALL ASSEMBLY
MIN. 3-1/4" THICKNESS LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE OR UL CLASSIFIED CONCRETE BLOCKS. MAX DIA OF OPENING IS 6".

U.L. SYSTEM NO. W-J-1020
METAL PIPE/CONDUIT THROUGH CONCRETE CONC OR CMU WALL

F RATING = 2 HR
T RATING = 0 HR



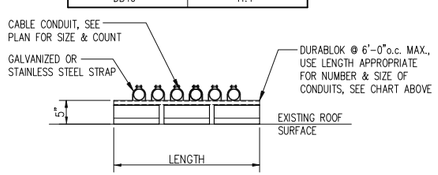


FLOOR OR WALL ASSEMBLY
MIN. 5" THICKNESS LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE OR UL CLASSIFIED CONCRETE BLOCKS. MAX DIA OF OPENING IS 8".

FLOOR/WALL PENETRATION DETAIL (TYPICAL)
SCALE: N.T.S.

2 / E-2

DURABLOCK DB SERIES LENGTH CHART	
PART NUMBER	LENGTH
DB5	4.8"
DB10	9.6"
DB20	20.2"
DB30	30.8"
DB40	41.4"



CONDUIT SUPPORT DETAIL
SCALE: 3/4"= 1'-0"

5 / E-2

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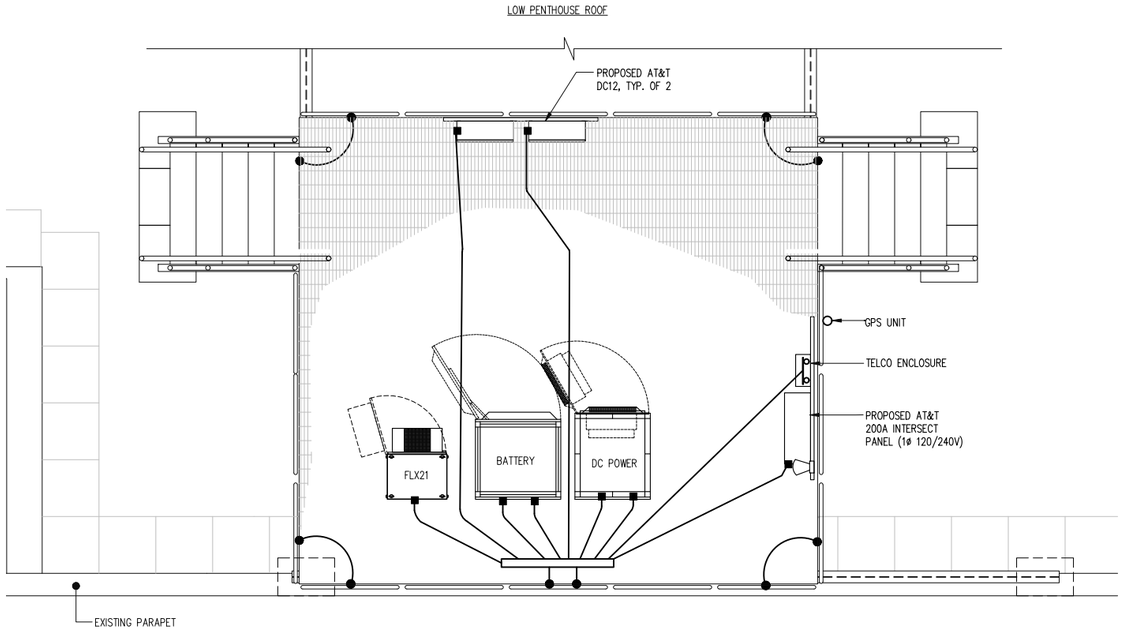
TITLE:

UTILITY RISER DIAGRAM AND DETAILS

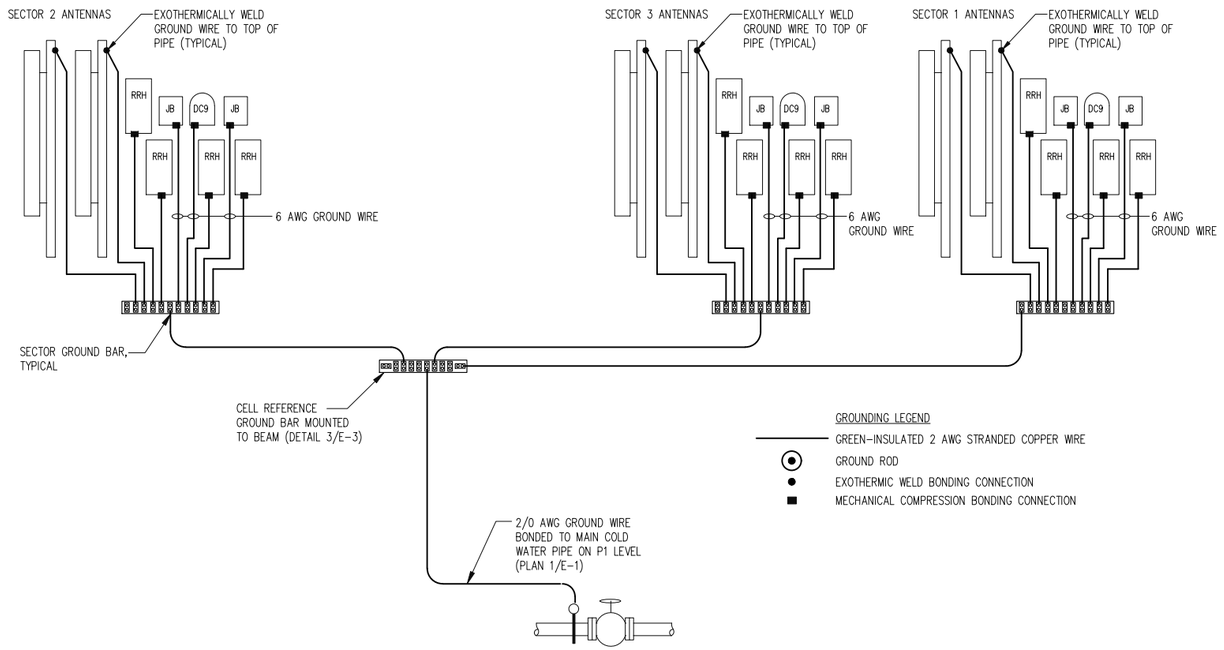
SHEET NUMBER:

E-2

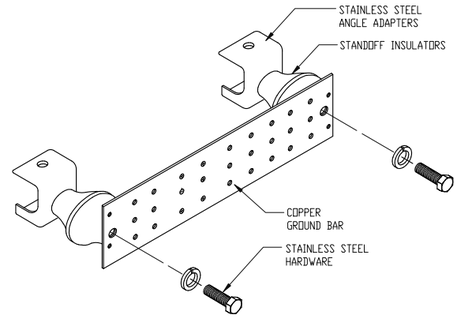


NOTE:
ALL GROUND WIRES SHOWN ARE 2 AWG GREEN-INSULATED UNLESS NOTED OTHERWISE.

EQUIPMENT GROUNDING PLAN
SCALE: 3/8"=1'-0" — 1 / E-3 — TRUE NORTH

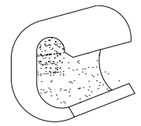


EQUIPMENT GROUNDING DETAIL
SCALE: 1"=1'-0" — 2 / E-3



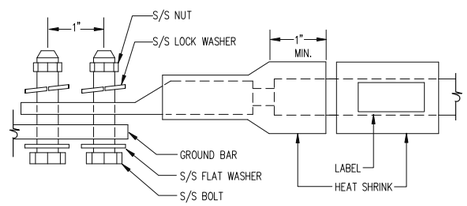
1. CELL REFERENCE COPPER GROUND BAR, 1/4"X 4"X 20" MOUNTED TO PLATFORM STEEL WITH ANGLE ADAPTERS.
2. SECTOR COPPER GROUND BAR, 1/4"X 4"X 12" MOUNTED TO SLED MOUNT ANGLES WITH ANGLE ADAPTERS.

GROUND BAR ISOMETRIC
SCALE: N.T.S. — 3 / E-3



C-TYPE COPPER COMPRESSION TAP CONNECTS TWO COPPER CONDUCTORS TOGETHER COMPRESSED WITH A HYDRAULIC CRIMP TOOL.
MANUFACTURER: HARGER, INC., SERIES CT.

SHELTER INTERIOR C-TAP BONDING CONNECTION
SCALE: N.T.S. — 4 / E-3



LUG NOTES:

1. ALL HARDWARE IS 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS.
2. ALL HARDWARE SHALL BE S/S 3/8-INCH DIAMETER OR LARGER.
3. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON-TOOTH WASHER BETWEEN LUG AND STEEL AND COAT ALL SURFACES WITH ANTI-OXIDIZATION COMPOUND PRIOR TO MATING.

LUG DETAIL
SCALE: TO SCALE — 5 / E-3

DCRA

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TITLE:

GROUNDING PLAN, DIAGRAM AND DETAILS

SHEET NUMBER:

E-3